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ROYAL COMMISSION
ON
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT
EDMONTON, ALBERTA

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ROYAL COMMISSION ON
THE GREAT SLAVE LAKE RAILWAY

Hearings of the Royal Commission on
The Great Slave Lake Railway held
at Edmonton, Alberta, at the Court
House, at 10.00 a.m., September 10th,
1959.

PRESENT:

Mr. M.E. MANNING	Chairman
Mr. WALTER D. GAINER	Member
Mr. JOHN ANDERSON-THOMPSON	Member

Mr. FRANCIS M. FEEHAN	Counsel
Mr. A. PATERSON	Secretary



THE SECRETARY: "P.C. 1959/705.

"Certified to be a true copy of a Minute of a meeting of the Committee of the Privy Council, approved by His Excellency the Governor General on the 4th June, 1959.

"The Committee of the Privy Council, on the recommendation of the Right Honourable John George Diefenbaker, the Prime Minister, advise that

Marshall E. Manning, Edmonton, Alberta

Walter D. Gainer, Edmonton, Alberta

John Anderson-Thompson, Yellowknife,
Northwest Territories

be appointed Commissioners under Part I of the Inquiries Act to inquire into and report upon the respective merits of the alternative routes which might be followed by a railway line to be built from northern Alberta into the southern portion of the District of Mackenzie, Northwest Territories, for the purpose of providing access to and contributing to the development of that portion of the Territories tributary to Great Slave Lake.

"The Committee further advise:

1. That the Commissioners be authorized to exercise all the powers conferred upon them by Section 11 of the Inquiries Act.
2. That the Commissioners adopt such



procedure and methods as they may from time to time deem expedient for the proper conduct of the inquiry and sit at such times and at such places as they may decide from time to time;

3. That the Commissioners be authorized to engage the services of such counsel, staff and technical advisers as they may require at rates of remuneration and reimbursement approved by the Treasury Board;
4. That the Commissioners report to the Governor in Council with all reasonable despatch; and
- 5 That Marshall E. Manning be Chairman of the Commission.

R. B. Bryce,

Clerk of the Privy Council."



SUBMISSION OF
PEACE RIVER POWER DEVELOPMENT
COMPANY LIMITED

Appearances:

Mr. J. S. Shakespeare

THE CHAIRMAN: Mr. Sheakspeare, I think you are going to present the brief on behalf of the Peace River Power Development Company.

MR. SHAKESPEARE: That is right, sir.

THE CHAIRMAN: How would you like to do it, Mr. Shakespeare? Are you going to read it to us or are you going to call a witness?

MR. SHAKESPEARE: No, I have no witness.

THE CHAIRMAN: Are you going to read the brief?

MR. SHAKESPEARE: That is right.

THE CHAIRMAN: We have been in the habit of listening to the briefs that have been presented with any comments that anybody wishes to make as he goes along so feel free to elaborate on it.

MR. SHAKESPEARE: Thank you. I don't mind being interrupted at any point. Perhaps it is well to follow the sequence we have.

THE CHAIRMAN: We may interrupt you or



we may wait to question you.

MR. SHAKESPEARE: Thank you.

THE CHAIRMAN: Are you ready to go ahead?

MR. SHAKESPEARE: I am ready now, sir.
Mr. Chairman, I believe this is the first occasion on which your Commission has sat in Edmonton ---

THE CHAIRMAN: Yes.

MR. SHAKESPEARE: I think it is perhaps fitting, I being privileged to be the first speaker at this session, to wish you well and congratulate you heartily on your appointment and elevation to the Bench which I shall follow with a great deal of interest and which will be a change to you. I hope you may have a successful career on the Bench.

THE CHAIRMAN: Thank you very much.

MR. SHAKESPEARE: Mr. Chairman, we do not particularly want to pull for one proposed route or the other in our brief; rather to tell something about the project in which we are interested and are developing so that you can draw your own conclusions from that along with other information you get from other sources at your hearings as to what bearing our development might have on your thinking about this proposed route. As you will notice as I go



along -- our interests are not confined to the development of the river and is not confined to British Columbia in the long run but it is one that is close to both the provinces, larger interests in both provinces which would tie in with the Hydro Electric potential of the Peace River.

As a matter of fact we have not considered that this is a provincial matter.

THE CHAIRMAN: We have not considered it as a provincial development, Mr. Shakespeare. We are appointed by the Federal Government and provincial boundaries, I do not think, concern the railway that is in issue.

MR. SHAKESPEARE: Very good. If I may proceed with the brief, Mr. Chairman.

Peace River Power Development Company Limited was incorporated on the 29th day of October, 1958, as a private company with authorized capital of 2- million no par value shares, of which there have been issued to date 11,365,086 shares.

Shareholders of the company include leading concerns in the fields of hydro-electric development and finance in this country and abroad. Shareholders and directors are listed in Appendices A and B.

I might interrupt here, Mr. Chairman, to say that at Fort St. John at a trip we made to Fairbanks the other day Mr. Mainwaring, the



president of our company, went further than this statement and said that the company already has the reports in. They are being printed in order to take to London for a meeting over there. There were four directors of the company on this trip and he announced that the project will go ahead, subject only to getting approval of the provincial government. We now have, in other words, final information and data and engineering studies before us and determined that so far as the company is concerned they are prepared to make proposals and to go ahead of the project, subject only to getting approval of the provincial government, which cannot be obtained until we complete our proposals in their final form and put them in to the government to get their o.k.

THE CHAIRMAN: Is there any reason that you know of that the provincial government may not approve?

MR. SHAKESPEARE: Personally I cannot see any.

THE CHAIRMAN: Do you know of any possible opposition to it?

MR. SHAKESPEARE: Not any particular realistic opposition. There has been a great deal of discussion. Some people have discussed this project in relation to the Columbia River project, wondering which one should be first but that has



been largely 'journalistic effort.

THE CHAIRMAN: Do you feel at liberty to tell us, whether you are or not, what the financial arrangements are, whether the project has been financed?

MR. SHAKESPEARE: On the financial side we have on our board as shareholders some very important hydro-electric companies in England who have made some of the largest developments in the world so that they will have their own particular firms here to carry this project forward.

However, with the vast amount of money that is going to be required we will undoubtedly count on getting public support from other companies and investors, both in England, United States and Canada in shares and bonds to finance a large part of the project because, as you will see, as we go along, it will cost about \$350 million to build the first stage of the development and about \$700 million to complete the development of this project, which embraces two dams and then there are a couple of other smaller dams which we will have to add at a later date within British Columbia. Then as we go along we will see there are other potential power developments that can take place in Alberta later on, with quite a vast amount



of power in Alberta as well; 5 million horse-power, actually, which is a lot of power. British Columbia presently develops about 2,750,000.

THE CHAIRMAN: You are talking about an additional amount equal to almost twice what is there now?

MR. SHAKESPEARE: That is right. The potential of this development is 5 million horse-power in the Province of British Columbia and 5 million in the future in the Province of Alberta.

COMMISSIONER GAINER: While we are on that question, Mr. Sheakspeare, of your company's proposals made to the provincial government, are those proposals likely to involve direct financial assistance or are they more to be in the form of rights of way or land acquisition and that kind of thing?

MR. SHAKESPEARE: They would be in the latter category. I don't think any of us are contemplating that the government would be asked for financial assistance.

COMMISSIONER GAINER: So that any issues that may arise or objections that may arise would be mainly over the question of acquiring rights of way or rights to land and so on?

MR. SHAKESPEARE: That would be the kind of thing, yes.

The company's proposed hydro-electric



project for the generation of 4 million horsepower of electricity centres at two damsites at Peace River Canyon, approximately 80 miles from the British Columbia/Alberta boundary. Amongst other things which clearly should be taken into account in planning the route of the Great Slave Lake Railway are these:

1. Raw materials from the area to be served by the railway which require large quantities of electric power to treat or manufacture them will need to be brought close to a large source of power.
2. Future development of potentially important power sites along the Peace River in northern Alberta will be much easier if construction materials and equipment can be supplied to those sites by rail.

The purpose of this Submission is to provide background information for consideration of these and related matters.

STATUS OF PROJECT

Under an Agreement with the Government of the Province of British Columbia made the 7th day of October, 1957, relating to the hydro-electric development of the Peace River, this company and its predecessor have made extensive engineering studies which will form the basis of proposals to be made by this company to the Province of British



Columbia by December 31st of this year in accordance with the said agreement. This company is the assignee of the principals named in the said Agreement which is attached to this Submission as Appendix C. The cost of these studies, including drilling and exploratory work, will amount to over 5 million dollars by the time our report and proposals are submitted to the Government in December. After receiving the proposals the Government will have, under the terms of the Agreement, three months in which to consider the feasibility of the proposed hydro-electric development. Our engineering studies, which are now virtually complete, give us every reason to believe that the project is feasible. All indications are that subject to the approval of the Provincial Government decision will be made to proceed with the project. The project will undoubtedly be of the utmost importance to the development of the Province of British Columbia and the Province of Alberta.

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The Hydro-Electric Project

Development of the power potential of the Peace River will be in three parts:

1. The present project, consisting of two dams at Peace River Canyon;
2. Additional dams at sites downstream in British Columbia;
3. Downstream dams in the Province of Alberta along the course of the Peace River and on the Slave River.

Principal feature of the project is a "high dam" to be constructed near Portage Mountain in the Peace River Canyon, 600 feet in height, with a crest length of over 7,000 feet. A secondary dam, a few miles down river from the high dam and constructed more or less simultaneously with it, would have a height of 150 feet and a crest length of 1,700 feet. The two dams would provide a total generation of approximately 4 million horsepower, the equivalent of 3 million kilowatts of electricity.

An important and almost unique feature of the project is the size of the reservoir lake which will be impounded by the high dam. This will extend for 70 miles above the canyon in the Peace River and 200 miles in the great Rocky Mountain Trench as shown on the attached "locality map" which will be found at the back of the brief.



The lake will provide tremendous storage capacity, much more than the present storage created by all existing hydro dams in British Columbia, Washington, Idaho and Oregon. This will be sufficient to permit full utilization of water regardless of season or the cycle of dry and wet years.

I might say that I have expressed that rather modestly as being "much more." Actually, it is six times more than the present storage capacity of water in Idaho, to give you it in the right perspective; so that the reservoir lake is, I think, an important factor in the economics of the development.

The reservoir will take a minimum of seven years to fill and when filled will have an elevation of 2,250 feet above sea level. Energy could be available in quantities up to 750,000 horsepower six years after the start of construction. The initial installation required to produce this energy will cost in the neighbourhood of \$350 million. When the full potential of the Peace River within British Columbia is developed and adequate transmission facilities are built the estimated cost will be in the neighbourhood of \$700 million.

The route of the main transmission line to serve the Lower Mainland and Vancouver Island will follow generally the course of the Fraser



River to Lillooet. The feasibility and economy of extra voltage transmission over long distances is now accepted by leading authorities.

The control of the river provided by the high canyon dam will enable an additional one million horsepower to be developed in future at other downstream sites within British Columbia, and an estimated 5 million horsepower to be developed at sites on the Peace and Slave Rivers in Alberta and the Northwest Territories.

Utilization of Power

The Royal Commission on Canada's Economic Prospects (Gordon Commission) indicated that due to ever increasing use of electric power for industrial, commercial and domestic purposes generating capacity in British Columbia will need to increase from approximately 3 million horsepower at the end of 1956 to 12.5 million horsepower by 1975.

The increase that is indicated there is a remarkable one, and it is accounted for, as, perhaps, you have witnessed in Alberta, by the fact that once electricity is introduced the consumption is ever-increasing both with the establishment of new industries and the use of more and more domestic installations in houses. Many houses, as you probably have witnessed in subdivisions, have started up with a certain



type of wiring, but a few years later they have to double the capacity because of gadgets they have installed; and it goes quite a little way towards supporting the view of the anticipated amount of growth in electrical consumption in the Province of British Columbia; and Alberta will be rather similar.

Principal consumers of Peace River power within British Columbia are expected to be B. C. Electric Company Limited, the B. C. Power Commission, and other utilities in British Columbia and in Alberta. In order to cover part of the cost of this huge development and keep costs to Canadian consumers as low as possible it is expected that power will also be exported to utilities in the Pacific Northwest of the United States, in accordance with Canadian regulations, but only to the extent that power is not needed in Canada.

I might say we have conferred with utilities operating in the northwest states of the United States, and they are tremendously interested in this development, because their power potential will be increased by this storage capacity we have as well as the direct power we will be able to sell.

THE CHAIRMAN: That is, the industries will feel more secure if they know the power is available?

MR. SHAKESPEARE: The utilities -- public and private -- in the states of Washington,



and Idaho find themselves in a peculiar position. There is a tremendous seasonal run-off of water, and seasonally they can develop great quantities of water; but, at the same time, they lack power at the lower period of the year, and that is an important thing; and they are very much interested . . .

THE CHAIRMAN: And they are short of it now?

MR. SHAKESPEARE: They have ample power during the peak period but they are definitely short during the lower periods of the year; and they will anticipate a rising consumption of power comparable to what I have mentioned for British Columbia; so that they can foresee that they are going to need to have more power.

This is rather a technical point but it is a tremendously important one and perhaps I can indicate it to you in this way, that the United States utility feel we will provide a means of storing electricity for them in this sense, that while our dam is filling -- which is going to take seven to ten years -- it will be possible for us to arrange with the United States utility for them to supply our customers; and once we get generating power on this 750,000 horsepower basis -- once we are in business -- we can then arrange for them to use their



secondary power, which is virtually useless to them, to supply our customers -- B.C. Electric and B.C. Power Commission and others -- while we keep our gates closed and keep our lake water at its highest, and they will receive it seasonally as they require it. The net result is a diversion of their secondary power into prime, firm power so that they can set up their operations for industrial purposes, which is the only thing that counts -- the firm power throughout the year being a material amount; and that, of course, is something that intrigues them completely and very much helps the economy of our development and also gives us a very important customer both for direct sale of power and for the storage issue, as it is called.

COMMISSIONER GAINER: For my own information, isn't it likely that the time at which you have power to sell or surplus or secondary power -- would that not be the same time when the power demands would be low in Canada? And isn't it likely that the time the Canadian consumers want power will be the time that the United States exporter might be able to export it? And, similarly, when you want to return the power? Is that not likely?

MR. SHAKESPEARE: We come back to the economic position in which we will find ourselves



on this project. We will be independent of seasons once we get operating.

I would say that our seasonal variations are similar in British Columbia to what they are in Washington and Oregon; therefore, when they would have a surplus we would have a surplus. But this is premised on our being in business and having customers to take firm power from us. We are committed to the supplying of one million horsepower straight to these customers.

In lieu of using power from the Peace River through the peak periods they will give it to us and we will store some power for them and then we will return it to them as and when it is required. We can let them have it any time they like. This, of course, means, in our particular operations, that we are able to get power out of storage and carry on on the basis that the demand might require.

We can, therefore, influence these power systems so far as they have got their grids hooked up; but it is a fact that these systems have merely seasonal storage capacity, varying from one part of the year to the other.

Under the terms of the 1957 Agreement rates charged for power sold in British Columbia will be subject to regulation by the Public



Utilities Commission of the Province of British Columbia provided that no additional sum shall be charged in the northeast and north central areas to equalize costs of transmission to other parts of the province.

It is noteworthy that transmission of hydro power to Fort St. John and Dawson Creek may be assumed from first generation of power since these centres are presently using expensive thermal power. Relatively few miles separate these centres from towns and potential industrial sites in Alberta to which power transmission would be quite economical.

Potential Industries

Much could be said about the number and types of industries which may be expected to establish in the Peace River areas of British Columbia and Alberta following the availability of relatively low cost electric power. History has shown that industrial development follows major power developments. This has been true in areas much less conducive to normal settlement than is the Peace-River country.

Industries such as pulp mills, cement plant, sawmills and various industries which will be required initially to service the construction of the project will almost certainly establish as soon as construction starts.



Smelter facilities, located at the most economic point considering transportation and source of electric energy, would be a natural development for utilization of the mineral deposits located in large areas of northern Alberta and Northwest Territories and northern British Columbia.

A plant to produce enriched uranium requiring up to one million horsepower of electricity, would be a most logical development close by the site of this huge hydro-electrical project. Transportation of uranium ore from the north to the power site would be a minor factor since the volume of ore required is so much smaller than in the case of other industrial ores.

The availability of power and large quantities of timber along the route of the new railway will undoubtedly result in the construction of large sawmills, plywood plants and other wood processing industries.

THE CHAIRMAN: Mr. Shakespeare, do you mind if I interrupt you? Would you mind going back to the paragraph before the one you have just read? You say " . . . a plant to produce enriched uranium . . . ". What do you understand "enriched uranium" to mean?

MR. SHAKESPEARE: It is a little like the timber business. For years we exported raw



logs from this country to other countries, and then we sent rough logs, and then we send sand logs; and now we are sending plywood.

THE CHAIRMAN: This is the same thing?

MR. SHAKESPEARE: This is the same thing. We have been sending out the raw material which is not too good. . .

THE CHAIRMAN: It is milled at all the mines in Canada, isn't it?

MR. SHAKESPEARE: Oh, yes.

THE CHAIRMAN: Every uranium mine has a mill which provides concentrate?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: Don't those concentrates go to Port Hope?

MR. SHAKESPEARE: The thing is that they have the uranium-enriching plant in the United States, and that enriching makes it into a much more valuable commodity.

THE CHAIRMAN: Is that the same sort of thing which is at Port Hope?

MR. SHAKESPEARE: No, not at all. This is something we haven't got yet in Canada, but there is a great deal of discussion about it.

THE CHAIRMAN: Is it a plant that deals with uranium in a manner similar to the way Trail Smelting deals with lead ore? Or can you compare uranium and base metal?



MR. SHAKESPEARE: No, not very well.

The enriching makes it very much more utilizable for thermal plants, and the scheme is that by using enriched uranium you can use it very much cheaper in a thermal plant -- in a nuclear plant -- than you can the raw material; so that countries all over the world would be able to import that from us and utilize it for the generation of power, since they haven't got any hydro, and be able to do so much more economically than they would if we exported the raw material, because the raw material is more bulky, and, therefore, they would require a far more expensive plant to utilize the raw material than is necessary to utilize the enriched material.



THE CHAIRMAN: Is it being done in Canada?

MR. SHAKESPEARE: Yes. It is a very crucial situation in Canada, of course, because we are in danger of losing our American markets for uranium when our contracts run out, which they will in another year or two. Canada is giving serious consideration to erecting a plant for enriching uranium, either this one or in Newfoundland.

COMMISSIONER GAINER: Am I not correct in saying that this uranium is the type that they use in the United States type reactors?

MR. SHAKESPEARE: That is right.

COMMISSIONER GAINER: But in Canada attempts are being made to develop a type of reactor which will use the product which we normally produce, the type of uranium. They are two different weights, aren't they?

MR. SHAKESPEARE: That is right.

COMMISSIONER GAINER: We are working on a type of reactor which would use a non-enriched uranium. Whether or not it will be successful is a question. But were you assuming that the type of reactor which would come in in common use would be the type which would use the uranium found here?

MR. SHAKESPEARE: Yes, and the same type



of unit would be adaptable for use in Northern Canada where they haven't developed yet or don't have the power potential.

COMMISSIONER GAINER: If these efforts are successful the hydro requirements will not be so great?

MR. SHAKESPEARE: Strangely enough, the hydro requirement is going to continue to be high, because the indications are such that you will not be able to produce nuclear power as cheaply as hydro as in other parts of this country. I think that the most that they have got down to now, as indicated, is about 9 mills. We are not happy about producing electric power at 9 mills; we have to produce it for much less than that in order to do it economically. In some parts of the country the cost does go to that for some small hydro installations, but we can certainly expect to produce it much more advantageously than at 9 mills, or else we wouldn't be in business on this project.

Factors of great importance to any industry considering establishing in the Peace River country are the relative accessibility of the area by rail and highway routes, good climatic conditions, surrounding farming communities which werve as potential sources of labour and the already existing facilities for family life in towns



and settlements on both sides of the provincial border.

I might say that I have recently been connected with the Kitimat project, and the remoteness of the area was a tremendously costly factor; there was no railway into that area and no road when we started. We had to establish a beach head by water, and the costs in opening up a country of that kind are tremendous. Of course, when I said it was accessible by rail routes, that is from the southern side; it is not all accessible.

Benefits to the Province of Alberta
from the Construction of a high
dam at the Peace River Canyon

Substantial benefits to the Province of Alberta will follow from the development of this hydro-electric project. As we see them these benefits will be:

1. Large quantities of hydro power would be available for transmission via Fort St. John and Dawson Creek into the existing northern Alberta network. This power could be available as early as 1966. The network might have to be strengthened depending upon the extent of the industrial, commercial, agricultural and domestic demand. Grande Prairie, with a service area population of 7,200 and Peace River, Alberta, with



area
a service/population of 2,250 are situate
within 200 miles of the project.

2. Inter-connection with the existing high voltage transmission lines in the vicinity of Edmonton would substantially reinforce power supply throughout the central and southern sections of Alberta. This would not only provide an additional source of firm power but also augment the year round capacities of hydro plants throughout the system.

3. Peace River downstream benefits

- (a) Control of the river at Peace River Canyon would make feasible major developments of hydro power at sites on the Peace and Slave Rivers downstream of the British Columbia/Alberta boundary.

Between the British Columbia/Alberta boundary and Great Slave Lake there is a fall of approximately 800 feet. With regulated flow and subject to suitable sites being available it is estimated that some 5 million horsepower could be generated along the Peace and Slave Rivers.

- (b) Control of the Peace River would



largely eliminate spring flooding, thus rendering flood control measures unnecessary and construction of bridges and dams throughout the course of the river in Alberta much less costly.

All of which is respectfully submitted.

THE CHAIRMAN: Do you want to deal with the appendices? I suppose the only appendix of length is the agreement.

MR. SHAKESPEARE: Yes. That was originally an agreement between the government and Birger Strid and Bernard Gore, who acted on behalf of Mr. Wenner-Gren of Stockholm. The agreement has since been assigned to this company, the Peace River Power Development Company Limited. It is we who are carrying the project forward. We will have spent on our surveys together with what they spent on the initial surveys something over \$5 million in connection with the damsites.

THE CHAIRMAN: Is the whole of the agreement assigned to your company, Mr. Shakespeare?

MR. SHAKESPEARE: Yes, the benefit of this agreement. There is another agreement with Wenner-Gren which relates to the whole watershed area which is a much more extensive area than we are occupying, and that relates to mineral, timber



and other resources, and railway. When it was discovered that there could be something like 4 million horsepower of power, it was decided to go back to the government and say that this amount of power seems to be available and we feel that a separate agreement should be devised to develop this power and a separate company formed for the purpose to consist of these leading hydro-electric people of the world, because they are the only kind of people who could carry out a project of this kind, and this is the agreement. There are parts of it I have referred to. I did refer to one or two things about the rates, that the cost of transmitting the power to Vancouver on the lower mainland will be considerable, but by the terms of the agreement those transmission rates are not applicable to distribution rates in the Peace River, which gives them much more consideration than the Vancouver people.

THE CHAIRMAN: Mr. Sheakspeare, we have a little extra time this morning, and I would suggest we adjourn until eleven o'clock. Mr. Feehan is the Commission counsel sitting beside you, and if there is anybody who would like to discuss with Mr. Feehan as to any questions they would like him to put to Mr. Sheakspeare, we could give you an opportunity to put them to



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Shakespeare

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him.

Have you any questions, Mr. Feehan?

MR. FEEHAN: I have one or two, yes.

THE CHAIRMAN: We will adjourn now.

---(Short recess)



THE CHAIRMAN: Mr. Feehan, have you some questions you would like to ask?

MR. FEEHAN: Yes, I have, sir. Mr. Shakespeare, I think you would agree that in the event that a railway is constructed south of the Great Slave Lake that a great deal of the materials used for the construction of the railway will have to take the water course north on the Slave and Athabaska Rivers -- the materials which will be used eventually for the construction of the railway?

MR. SHAKESPEARE: I would think so.

MR. FEEHAN: I imagine that you are also well aware of the fact that the Slave and Athabaska Rivers are very low draught rivers so they have to use barges?

MR. SHAKESPEARE: Yes.

MR. FEEHAN: At some times the draught is two or three feet and some times even less?

MR. SHAKESPEARE: Yes.

MR. FEEHAN: You will also agree that the materials used for the construction of a railway would be very heavy materials. I am wondering what the effect of the stoppage of water up river on the Peace would be, on the Slave River at the confluence of the Peace and Slave Rivers.

MR. SHAKESPEARE: We have looked into that question because, as you know, our project



will require authorization of the Navigable Waters Act like any other navigable river. We are aware of the problem of barging. At worst, that would mean we would release water at a certain period of the year. When we start the dam the water will not be a dam that cannot be penetrated but we will have at least four diversion tunnels which will enable water to be put through the dam at any desired pace seasonally. As you are probably aware, I think it is either a month or six weeks that there is a shortage of draught of water on the Slave River. It could be that we would be required to let through some water at that time.

MR. FEEHAN: You feel that that difficulty can be overcome?

MR. SHAKESPEARE: Oh, I certainly do.

MR. FEEHAN: There has also been some suggestion, and that is included in the Wenner-Gren project, of a monorail or some other type of rail constructed down the Trench in British Columbia. Do you know anything about that?

MR. SHAKESPEARE: Yes, a little. That is not our direct concern, but for the Wenner-Gren B. C. Limited to deal with. They have announced recently in the Vancouver paper that their proposed route will run north through Prince George to the Yukon. It obviously cannot run



through the Trench; that would require a submarine when the reservoir gets filled.

MR. FEEHAN: It would have to run beside the Trench or in that vicinity?

MR. SHAKESPEARE: Well, on a higher level and that is difficult because of the tributaries that come into the Trench which would take some bridging.

MR. FEEHAN: What do you think about the different gauge railway, different from our normal railways in Canada? The proposed different gauge which is to be constructed by Wenner-Gren?

MR. SHAKESPEARE: I think you have reference to a monorail and the monorail principle; the indications are that is being abandoned in favour of a standard type railway. I presume that means a standard gauge unlike the Yukon and White Pass.

MR. FEEHAN: Would you tell us whether or not there would be a connecting link between your proposed project and an east-west railway and the proposed Wenner-Gren railway?

MR. SHAKESPEARE: Would you call the P.G.E. an east-west railway?

MR. FEEHAN: Yes.

MR. SHAKESPEARE: They would definitely have to connect with another railway to make the economics of the railway work out. As you know



the P.G.E. does go through Prince George as well as going on to Port St. John and Dawson Creek.

MR. FEEHAN: In addition to the Water Resources Act would there be any other need for you to approach the federal government with regard to agreements on this proposed Peace River project?

MR. SHAKESPEARE: Oh, indeed, there are.

MR. FEEHAN: What would they be?

MR. SHAKESPEARE: One would be fisheries. I would think we would have a relatively agreeable time with them on fisheries because this river is peculiar in that it flows into the Arctic. So far as we can discover there is no fish problem whatsoever because there are no salmon in the river, for instance.

MR. FEEHAN: Would you need to approach them on any other matter?

MR. SHAKESPEARE: There is a new Act, the Energy Act, for export of power, and when we get to the point of exporting it to the United States, if we are going to, we would have to clear with the Energy Board in accordance with the regulations that have not yet been promulgated.

MR. FEEHAN: So most of your arrangements with the federal government are still in the



embryo stage?

MR. SHAKESPEARE: That is right.

MR. FEEHAN: Your arrangements with the provincial government have proceeded beyond that stage?

MR. SHAKESPEARE: We have been in constant communication with the controller of water rates who is our principal man to deal with in Victoria because he is the one mostly concerned and will have a great deal to do with consideration of our engineering plans. We have also been in touch with the Lands Department because we have had to have reserves set up for flooding of the reservoir and transmission lines to the mainland. We have been in touch with other departments as well.

MR. FEEHAN: Have you any information at all on the proven ore bodies in norther B.C.?

MR. SHAKESPEARE: Very little. I do know and have seen reports about coal deposits in several places on either side of the Peace River particularly along the Carbon River and they are extraordinarily extensive. I am not an expert on minerals and coal but these are extraordinarily extensive deposits. Opposite it on the north side of the Peace River some distance back there is another vast deposit of coal. It has been known for many years there would be no difficulty



obtaining information on the type of coal and some indication of the extent.

MR. FEEHAN: In this particular area would you agree that coal would probably be the least useful mineral you could find?

MR. SHAKESPEARE: There are many who feel that coal has a great future. It is in a lull at the present time but the properties of coal are among the most valuable of all the elements. You can manufacture anything from it, particularly along the chemical line; when you get the combination of coal and power and gas great things are possible.

MR. FEEHAN: You have told us that the present consumption of electrical power in British Columbia is approximately three million horsepower and that it is anticipated that by 1975 the consumption will be $12\frac{1}{2}$ million horsepower. Could you tell us how you arrived at those figures or give us some idea?

MR. SHAKESPEARE: Yes, I could give you the source of my information. You will find I have with me a copy of the presentation of the Province of British Columbia to the Gordon Commission and those figures are given. Likewise the British Columbia Electric made its own independent study of the future of power in British Columbia and they virtually paralleled those



same figures. The Gordon Commission itself commented on it and dealt with the matter in their report and reference will be found to it in their report.

MR. FEEHAN: The reason I asked that question was because I was wondering whether you might be begging a question to a certain extent in this regard, that the assumption is that if the Peace River Power project goes ahead industries will be required in that area. Now, have you taken that into consideration in using these figures of $12\frac{1}{2}$ million?

MR. SHAKESPEARE: No, on the contrary those figures came up quite independently of the Peace River project, which was not seriously in the minds of the people at the time the Gordon Commission was sitting. The Peace River was not dealt with at that time. This came up since. It is since that date that we found there was this very huge potential of power available from the Peace River.

MR. FEEHAN: So there is a possibility that the figure of $12\frac{1}{2}$ million horsepower is small, if anything?

MR. SHAKESPEARE: There is a distinct possibility. Every time we have in the past forecast our need for electricity we have underestimated but at this time it seems inconceivable



because it is so high. The figure I would mention would require both the potential of the Peace and Columbia rivers by 1972. I believe it would utilize the whole of the potential of the Columbia and of the Peace River in British Columbia.

MR. FEEHAN: Does your company propose to make any concerted effort to bring industry into the Peace River area in the vicinity of the dam?

MR. SHAKESPEARE: We are already working on that and are getting information available, and supplying information to possible industries. We have been in touch with people like a cement plant who would establish with a view to carrying on in that area and servicing the project through construction and then be able to operate in that location near Port St. John.

MR. FEEHAN: This is probably not a fair question, but could you anticipate the amount of power that might be used by industry located in the Peace River block and vicinity from your plant?

MR. SHAKESPEARE: The figures I would give would vary so vastly as to be almost meaningless. There are many industries which can be extraordinarily important to a community and it depends very largely on the power and will use very small quantities in relation to the type of power we are developing. Power for many



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manufactured articles is a very small ingredient but the availability of the power is very important when you get things like pulp mills which do require a large amount of power. The indications are there will be enough pulpwood from the clearing programme alone in the reservoir to start two large pulp mills; five large pulp mills can be started from the timber of the watershed surrounding the reservoir on a perpetual basis.



MR. FEEHAN: These pulp mills were brought in to avoid waste. They probably might not have an immediate market, but the timber would be used rather than wasted?

MR. SHAKESPEARE: The timber would be available more or less on a salvage basis and thereby become a cheap pulpwood for the pulp mills to utilize. There will be an extraordinary rapid and extensive forestry operation in order to get the timber out, and they can't use it all as fast as it can be cut and a good deal of it will have to be stored until such time as the water has risen.

MR. FEEHAN: Have you any information as to the present cost of electricity in the Alberta section of the Peace River?

MR. SHAKESPEARE: I am sorry, I don't.

MR. FEEHAN: Have you any for British Columbia?

MR. SHAKESPEARE: Well, in British Columbia the current costs of electricity in the Vancouver area is averaging at about between five and six mills; I believe around six mills.

MR. FEEHAN: Would the construction of your project have any change or produce any change in the cost of electricity to the consumer?

MR. SHAKESPEARE: We will be competitive in that market, and in order to sell the



power we conceive that we would have to produce a price at least as good as the price there, and we feel that we can do better. How much better remains to be seen, because if everything was worked out at the optimum we could find one cost figure; if hazards were incurred and delays encountered then, of course, you will have a somewhat higher figure and it is very hard to come out with a figure at this stage of the project and say that that will be our price. Likewise, as you probably know, the initial power will cost more to produce than when the project is completed, and undoubtedly our costs will be affected by the amount of storage business we can do for our neighbouring states across the line in the United States, because that is quite a factor on the project.

MR. FEEHAN: In asking that question I was particularly interested in any appreciable change that might occur in the price of power in the Peace River area.

MR. SHAKESPEARE: The price of power in the Peace River area will be less than in Vancouver because of the very high transmission costs, because it is a very high cost to install the transmission line to take it to the mainland.

MR. FEEHAN: You haven't told us which route your company would prefer. At least, I



don't recall you saying so.

MR. SHAKESPEARE: Well, we are in the position we don't want to try and determine that. We haven't got all the facts before us. That is the assignment of the Commissioners, to come up with the answer to that one. We have endeavoured to show that this huge quantity of electricity will be available for industries. We would certainly like to see whatever railway is put in accessible to future power sites in Alberta, wherever they might be along the route of the Peace River. Just where those sites are has not been carefully engineered. There is the site of the Vermilion Chutes that has been referred to, and there are another couple of hypothetical sites, but they would have to be carefully examined to determine what the foundations are and what the storage capacity would be and the power generated to make them feasible.

MR. FEEHAN: Apart from power, you have nothing to say about the potentialities of the North?

MR. SHAKESPEARE: Well, I have just come back from Fairbanks where I was at the Northwest Conference, and a great deal was said about development in the north. Perhaps I had better not get onto that subject. But, of course, it is a very broad one and it requires a good many



different approaches than are required down here, in financing, and so on. There was one point that came up, and that was that it was considered in Alaska that railway routes that are under study are the prime consideration in northern development, because without those private capital can't get to work, can't apply itself.

MR. FEEHAN: And there was the feeling that at least the Americans were interested in the north country.

MR. SHAKESPEARE: Well, I was tremendously impressed by the amount of expansion that is going to take place in Alaska and, remarkably enough, without any particularly great resources or economic advantages. There is good reason to expect a tremendous amount of influx of population, and I was wondering what people will do when they get there, because, apart from two pulp mills constructed in the last two years, there doesn't seem to be much for them to be gainfully employed.

MR. FEEHAN: Mr. Shakespeare, I know that your company is interested mostly in providing large and vast quantities of power, but the question has been asked as to whether or not a substantial difference in the cost price of power could be given to persons residing in the immediate vicinity of your plants.



MR. SHAKESPEARE: That is a good question, and in that relation I mentioned the uranium enriching plant. Where the power ingredient is so extraordinarily important -- a million horsepower is a tremendous quantity of power. It is more than they use at Kitimat. So that we are in a unique position, particularly in the early stages, to attract such an industry, and the power costs to an industry of that kind would have to be on a minimum basis, and if they established close to the plant they would not have the cost of transformers, and, likewise, they would save the cost of transmission because virtually no transmission line would be required to serve them.

MR. FEEHAN: I think that is all.
Thank you.

COMMISSIONER GAINER: Perhaps I could raise one or two smaller questions just for my own information. What I would like to ask here is, is there anything in the present proposal of your company that would affect adversely, let's say, or even advantageously power site development downstream which may take place by others, let's say at some future time; that is once your reservoir is filled?

MR. SHAKESPEARE: Well, it is the control of the river at the Canyon; that is the place it has to be controlled which really makes



feasible the downstream control because an undammed river is not too good because you can only utilize the minimum flow, whereas in a raised river you can set it up from possibly 20,000 cu. secs. to 35,000 cu. secs.

MR. FEEHAN: Would it be accurate to say that you can only develop the minimum from the minimum flow?

MR. SHAKESPEARE: The only valuable -- the only usable quantity of water is that which is determined by the minimum flow, because industries cannot use seasonal power.

MR. FEEHAN: If you haven't customers that are able to use seasonal power, your restriction is what you can deliver and guarantee?

MR. SHAKESPEARE: Yes. There are extraordinary few seasonal users of power. Sometimes in a mill they use quantities of one kind and another, and they may use their own power and use a secondary power at other times.

MR. FEEHAN: While we are on that aspect, you mentioned a figure at a couple of places for the potential in the Slave River. Let's take the Slave River. Does that potential figure include what you view to be the downstream benefits, or is that the figure which might be available in any event if that site was developed and you had no control in the upstream Canyon?



MR. SHAKESPEARE: No. The figure I gave you would be the potential figure between the Alberta boundary and the Slave River; that is the total potential.

MR. FEEHAN: That is with or without your present project?

MR. SHAKESPEARE: With the present project.

MR. FEEHAN: Do you know what the figure would be without it?

MR. SHAKESPEARE: I haven't got the figure before me. It would be very much less and it would be questionable whether most of the sites that would be available would be such that would justify construction because of this seasonal flow of water. In other words, they would have to build to the minimum flow.

MR. FEEHAN: I can see how that would apply to the Athabaska River, but would it apply to the Slave River?

MR. SHAKESPEARE: It depends on the engineering of it and how much storage they are able to effect in connection with it.

MR. FEEHAN: You don't know offhand whether the Slave was considered to be characterized by high seasonal variations in the flow?

MR. SHAKESPEARE: Well, the Peace River, the Pine River are very seasonal, and



certainly the Slave River is very seasonal, it gets down very low and they can just do their barging in the dry seasons.

MR. FEEHAN: Could you give me an estimate, percentage estimate of what the potential would be without upstream control?

MR. SHAKESPEARE: No, I couldn't give you it today, and I couldn't tell you if it would be economical. All I can tell you is that the controlled river like the Columbia -- they have developed it through the United States, but those sites are going to be made tremendously more valuable because of the control which will enable those same installations which have been there for years to put in more generators and generate a great deal more firm power than they have been able to do before. It has been indicated, I think, by the flow in the Peace which is between 8,000 and 10,000 cu. secs, which is a unit of measure, in the low season in an uncontrolled stream and the 35,000 which will be the continuous flow when the project is installed.

MR. FEEHAN: That would be the order of variation?

MR. SHAKESPEARE: At that particular river, yes.



COMMISSIONER GAINER: You don't know what the figures happen to be on the Slave or Athabaska?

MR. SHAKESPEARE: No. I wouldn't say it would be in the same proportion, but it would be comparable.

COMMISSIONER GAINER: Now, on this matter of control, supposing you had a navigation interest which might well be interested, we will say, in your letting more water run out of your reservoir in the fall for six weeks. How is that able to be negotiated -- that is, if a dispute arises between a navigation interest -- and this is after you are operating?

MR. SHAKESPEARE: After we are operating their situation will be abundantly improved, because they will have no more problem.

COMMISSIONER GAINER: I can understand that; I think that might well occur; but at the same time it might be that some interest would feel that it could be even improved by, let us say, increasing the draught, which might be indicated at 3 feet to $3\frac{1}{2}$ feet, to provide a little more tonnage on the barges.

MR. SHAKESPEARE: In other words, that we should improve on nature even more?

COMMISSIONER GAINER: That might well be argued. But there might be some interests.



Who would have jurisdiction in a case like that?

MR. SHAKESPEARE: Well, I think that one is rather careful about interfering with the natural flow of seas, but when you improve on nature you are not normally required to make a further improvement.

But that would come under the Navigable Waters Protection Act, because that would be a matter affecting navigation; and if anybody was to do it it would be done through the Navigable Waters Section. Either that, or by negotiation. If it became valuable enough to the navigation interests -- shipping interests -- to have that water there I suppose it would be for them to find out from us if they could work it in with our development.

COMMISSIONER GAINER: In advance, perhaps, or in the planning stages?

MR. SHAKESPEARE: But, on the other hand, they wouldn't have a very strong case if they only had two feet of water and we are going to supply three and a half; and they couldn't ask us to supply six; because the water once it is stored there will, naturally, be valuable for producing electricity.

COMMISSIONER GAINER: I understand that; but human nature being what it is I wondered who might be handling disputes of that kind.



MR. SHAKESPEARE: Well, you see, before we can develop this at all we have to satisfy Navigable Waters; we also have to satisfy a rather difficult department, the Water Controller; and he is answerable to all the people along the river who require irrigation and flow control and all the other things as well as power development; so that he has to be abundantly satisfied that he isn't going to get too many complaints. He always handles these matters, and you have to have a permit before going ahead; then, once you have your permit you can go ahead, otherwise you couldn't build on it.

COMMISSIONER GAINER: So far as your proposal goes do they envisage anything with respect to the construction of further dams down river, or not? When you are negotiating and working through your agreements with those various parties will they include . . . ?

MR. SHAKESPEARE: Downstream -- if you would refer to the map at the back you will see the main dam which is the important one; that is Peace River Canyon; and once that is there this smaller dam will be put in. That is a very much smaller development. That is what you call a controlled dam operation. Then you can have the advantage of the controlled flow.



Those two dams are embraced in this project. However, there at least two further sites between those two and the Alberta/British Columbia boundary which will normally be developed and can be developed very reasonably to produce power; and those would be a matter for further development. When we are getting to the point of actually having the first two this will undoubtedly go ahead and they will be very attractive developments.

COMMISSIONER GAINER: Nothing beyond the boundary so far?

MR. SHAKESPEARE: Beyond the boundary of Alberta?

COMMISSIONER GAINER: Yes.

MR. SHAKESPEARE: So far our relations have been with the British Columbia government and the Water Controller, and we have no agreement on that with the Alberta government. We have had certain discussions with them and have kept them informed and they have been very cooperative and interested; as to when those developments might go ahead beyond the Alberta boundary -- it might be some considerable time.

COMMISSIONER GAINER: What I am really concerned about is this: Is it likely to happen that you might have to negotiate franchises or acquire right to land well downstream with the



intention of developing -- that is, perhaps, ten or fifteen years hence -- but that in the meantime these would not be available to other interests?

MR. SHAKESPEARE: Well, that would be a matter of having a reserve rather than acquiring sites, and if the Alberta government saw fit to place a reserve on the potential development site they would do that, and then they would hold them available for us to work out an arrangement on them. How that would work out would be generally in the hands of the Alberta government.

COMMISSIONER GAINER: That would be a matter of negotiation -- how long they should be held, and so on?

MR. SHAKESPEARE: That is right.

COMMISSIONER GAINER: Just one small point: You mentioned a lower rate in the Peace River area, I think, in discussion with the B.C. Power Commission. These rates wouldn't necessarily apply to Alberta -- the Peace River area in Alberta? There would have to be an arrangement worked out separately?

MR. SHAKESPEARE: It might follow automatically, because if we supply it at Dawson Creek I suppose whatever utility would handle it would presumably be free to take it further.

COMMISSIONER GAINER: But they would



not be necessarily guaranteed the same price as B. C. customers?

MR. SHAKESPEARE: I would say that in the spirit of the agreement we can't come to a differential

COMMISSIONER GAINER: I didn't mean to imply that. I just wondered if your agreement does not guarantee that necessarily.

MR. SHAKESPEARE: No ; they just mention that in the north central part of British Columbia, with an arrangement.

COMMISSIONER GAINER: You mention your high voltage long distance transmission. You feel this is now feasible?

MR. SHAKESPEARE: I am not an engineer, but I find it extremely interesting. High voltage transmission has come to the fore recently. It is being developed in this country following its use in Sweden and Russia and other parts of Europe. We plan to have very high voltage transmission on this line. What happens is that if you get a high enough voltage you don't get the same loss of power en route.

COMMISSIONER GAINER: You mean percentage loss?

MR. SHAKESPEARE: Percentage loss. It reduces it; and the expense of your installation -- the capital cost of your installation --



before you can have this installed and in operation is extremely satisfactory. There was a very, very good article in the June issue of Fortune on high voltage transmission, and there it was suggested that it will not be available before you will have a grid running from the one end of this country to the other. Of course, in Canada, like our telephone connection and our railway lines, you will quite conceivably have high voltage transmission lines throughout the most of Canada. The extraordinary thing is that nobody seems to have quite an answer to it. It isn't a case of putting your electricity in at one point and having it run to the end of the line; rather it is a case of putting power in at Peace River, we will say, and it causes pressure on the line and that pressure may be drawn off elsewhere. So that the actual electricity doesn't flow. The transmission is not actually transportation of electricity; it is just a sort of pressure; and what happens the engineers don't seem to be able to explain. So that is about the best explanation I have had of this pressure which is exerted all along the line; and it is not a question of transportation of electricity from one point to another.

COMMISSIONER GAINER: Well, have you



any idea as to what would be the proportion of the cost of delivering power from your project on the Lower Mainland -- what it would cost?

MR. SHAKESPEARE: I don't want to venture a fraction or a proportion, but I would say it is a very material one.

COMMISSIONER GAINER: Rather a substantial proportion . . .

MR. SHAKESPEARE: Yes.

COMMISSIONER GAINER: . . . would be your transmission cost for the overhead installation and high voltage station?

MR. SHAKESPEARE: Yes, that is right; and at first, all along the line, we will have stations to produce it for local consumption and distribution to the Okanagan and other areas in the province.

THE CHAIRMAN: I might ask a couple of questions. You mentioned the advantage in transportation that would accrue from having river control. Has any engineering work been done, do you know, so that you can tell us to what extent the navigation will be improved in the Slave River?

MR. SHAKESPEARE: Well, no; but it would seem to me to follow automatically that you do have low periods on all the rivers which synchronize about the same time. There are a



number of tributaries of the Slave River of which the Peace is an important one, and we do know that our volume of water will be levelled out at some minimum flow to our mean flow which will be available so far as the Peace River is concerned; so that you will have this additional water in the Slave during the lower period.

THE CHAIRMAN: The lower period on the Slave are August and September?

MR. SHAKESPEARE: I believe so.

THE CHAIRMAN: How long does it take to get from where the dam is to where the Slave is? Would it be a week?



MR. SHAKESPEARE: I would probably guess it was an average of something better than a walking pace, is it not? I have not investigated it that long.

THE CHAIRMAN: There is no danger ---

MR. SHAKESPEARE: I would think that at one river by comparison the Notekewin River I would say would be more than a week.

THE CHAIRMAN: There is no danger of your walking the water at your dam? You would be storing water within a week or two of your water being low.

MR. SHAKESPEARE: Well, I would think that they have had enough information on the seasonal variations in the river to know more than a week or two in advance just how low the water is going to be because they have been taking records over quite a number of years.

THE CHAIRMAN: When you are using a lot of power you let a little extra water go over the dam?

MR. SHAKESPEARE: Not necessarily in this case. We might not spill any.

THE CHAIRMAN: How can you develop power without spilling -- oh, I see, some water goes through the turbines?

MR. SHAKESPEARE: You will find it goes through the turbines.



THE CHAIRMAN: Some spills over the top of the dam?

MR. SHAKESPEARE: That is not quite it. In some cases there are pillaries, not going over the spillway or over the dam.

THE CHAIRMAN: There is always some going over the dam?

MR. SHAKESPEARE: No.

THE CHAIRMAN: During one year some water--

MR. SHAKESPEARE: Not necessarily in this lake. If we utilize the whole of the water, as we expect to do, we would only at extraordinary periods have anything going over the dam at all.

THE CHAIRMAN: If you are not going to use it all or it all goes through the turbines, then, of course, will it be going through the turbines at a fair rate in order to maintain the level in the river?

MR. SHAKESPEARE: Yes. You see, the controlled flow would be going through the turbines that is at 35,000 cu. secs.

THE CHAIRMAN: If the time would come when you wanted to use very little power, that might be the time when you would have very little water through your turbines?

MR. SHAKESPEARE: That is quite possible. If that happened, once the project is in operation, it would not be a particularly



serious matter to release some water and let it run through the turbines freely without generating power because we do not need the power at that time.

THE CHAIRMAN: Let us take the period of July. That is the lowest period for the consumption of power throughout the year, is it not?

MR. SHAKESPEARE: Depends on your load. Your major operations may be extremely active in the summer time. For domestic use, yes. For industrial use it would be much higher.

THE CHAIRMAN: What is the difference between the time you are using the most power and the least power? What variation is there?

MR. SHAKESPEARE: From day to day the variation is quite a lot but during the year it doesn't vary tremendously except in domestic use because of lighting.

THE CHAIRMAN: From one month to another there is not very much difference?

MR. SHAKESPEARE: There is in your domestic light bill but your industrial use is usually the major factor and that does not vary necessarily or uniformly. It depends on the industry you are catering to.

THE CHAIRMAN: Does it follow that there is not much difference in the volume of water that would be going through your turbines



from one month to another during the year?

MR. SHAKESPEARE: Well, our project contemplates the river letting through a pretty steady flow of water.

THE CHAIRMAN: Through the turbines?

MR. SHAKESPEARE: Yes. We will certainly have an extensive follow-through with 35,000 cu. secs. or whatever is required for navigation purposes in that particular period while the dam is being constructed. So far as navigation is concerned, there is that period where we will have to be very sensitive to requirements along the Slave River.

THE CHAIRMAN: But you can always release enough water?

MR. SHAKESPEARE: Yes. We will have four diversion tunnels at least built in the rock all the way where the dam is going to be while the dam is being constructed.

THE CHAIRMAN: Would you mind telling us a little more about the degree of certainty that there is that this development will be proceeded with?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: I understand sometime in January or about January you make your proposals to the British Columbia government, do you not?

MR. SHAKESPEARE: By December 31st.



THE CHAIRMAN: Then the British Columbia government has about three months in which to decide whether they accept the proposals or not?

MR. SHAKESPEARE: That is right.

THE CHAIRMAN: There may be some negotiation during that period, I suppose?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: Then, if, as you hope and expect, I take it, satisfactory arrangements are made with the British Columbia government then some public financing will be arranged?

MR. SHAKESPEARE: That is right.

THE CHAIRMAN: Which may take a few weeks or a few months?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: You are very optimistic about the prospect of a public financing plan for the project?

MR. SHAKESPEARE: Yes, we are. We have a financial group working on the plan for the financing, of course, already; including such companies as Wood, Gundy in Canada and Nesbitt Thomson, who are the biggest people in the utility field investment in Canada. They are both financially interested in the company. They are shareholders.

THE CHAIRMAN: Can you tell us some-



thing more on the association you think of there is between this proposed venture and the railway into the Northwest Territories?

MR. SHAKESPEARE: Well, yes. The availability of power will undoubtedly give immediate incentive to industry to establish in order to service our requirements in this vast construction. We will have possibly 3,500 men working. It will be a tremendous construction job. In connection with that we will have a great deal of servicing in the way of a cement plant, oxygen plant, and various other servicing industries which we believe will in many instances be prepared to set up in that part of the country.

THE CHAIRMAN: That applies to the area, say, around Peace River, does it not?

MR. SHAKESPEARE: They would be established, presumably, around Fort Good Hope.

THE CHAIRMAN: That is going to take place anyway whether the railway is built to the south shore of Great Slave Lake or not, is it not?

MR. SHAKESPEARE: Quite right.

THE CHAIRMAN: So that these benefits of which you speak, they would accrue to the Peace River area quite independent of any proposed railway?

MR. SHAKESPEARE: That is right. We



already have the P.G.E. railway which will, in effect, service our immediate construction requirements and we are hopeful they will have a spur line built into the site; but coming to the proposed Great Slave Lake railway, our interest in that would be in relation to the -- naturally we want to encourage industrialization of the area. We feel it may form an important economy in itself with the availability of industrial requirements such as gas, oil, hydro, coal and timber. In particular there is in the Peace River country a lot of timber. Well, now, that is an industry that employs a great many people in logging and the manufacturing of it. They would be potential customers of electricity primarily in their mills and secondarily in the areas in which they, as a matter of form, are living permanently in that area.

THE CHAIRMAN: Do you think that the power, which you hope to have, would be able to give much assistance to the lumber industry for some distance north of Grimshaw?

MR. SHAKESPEARE: Yes. There is already a number -- a great deal of lumbering now going on in the country. The Fort St. John Lumber Company have a large operation at Chetwyrd, south of Moberly Lake. They are, I believe, still obliged to use diesel power, which is very,



very expensive so they are at that stage ---

THE CHAIRMAN: That is near Moberly Lake?

MR. SHAKESPEARE: That is right.

THE CHAIRMAN: Sorry I interrupted you. Go ahead and finish your answer.

MR. SHAKESPEARE: So if they also had at Fort St. John and at other points available hydro power, it would certainly stimulate development of the forestry industries, sawmills and so on.

THE CHAIRMAN: Do you mind looking at this map which Mr. Anderson-Thompson has. Let us look at Peace River. Here is Grimshaw. This is Fort St. John. Your proposed site is over here.

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: Just about there?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: What I had in mind is what you would do for lumbering from the area from Grimshaw north to, say, High Level. High Level is the most northerly area for lumber, is it not, Mr. Baldwin, for which we have been discussing the lumber industry?

MR. BALDWIN: Very close to High Level; possibly a little north and a little east of High Level. There is something, I think, shown on the



map. That is what I was trying to find out, what the distance would be from the source of supply.

THE CHAIRMAN: Have you a map?

MR. BALDWIN: Yes. We seem to get enough maps of British Columbia and Alberta but we find it hard to get a map of both of them.

THE CHAIRMAN: Would you like to come up and look at this map?

MR. SHAKESPEARE: I have one that straddles both. It may be quite useful if you would care to refer to this. I would say, from this map, there exists grids there in Alberta, as you see, indicated by the little green and red lines. This is an Alberta grid map and to the extent that we have already reached into the area, of course, it is a very simple matter to continue along.

THE CHAIRMAN: There is nothing north of the Peace River; nothing remains to take in the areas north?

MR. SHAKESPEARE: There is no power north.

MR. BALDWIN: Sixty miles north.

THE CHAIRMAN: Is there any of that power used for the lumber industry?

MR. BALDWIN: The only place where it is used is right at Grimshaw. There is a mill



at Grimshaw used for planing and some small further refining. They use lumber brought down from 180 miles to the north.

MR. SHAKESPEARE: By truck?

MR. BALDWIN: By truck. I would think that is the only place where power is used. In connection with north of Grimshaw I was looking to see if I could find a place to see what 200 miles away from the source of supply would amount to.

MR. SHAKESPEARE: I mentioned 200 miles merely in relation to the Peace River. There is nothing about the 200 miles that is particularly important. The important thing is that there is existing transmission lines for some distance and if there were going to be a great many mills going into the area, one mill would not be enough, the company would be prepared to extend their lines going into the area.

THE CHAIRMAN: What I am getting at is this: perhaps this is not a question that you can answer offhand. We have had some evidence that there is a substantial amount of timber in this area north of Grimshaw.

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: And it has been suggested that if a railway were to be built from Grimshaw north, more or less along the Mackenzie highway,



the amount of lumber that would be obtained out of there would be increased. I am interested in knowing to what extent your electric power may help that industry.

MR. SHAKESPEARE: That would work in this way ---

THE CHAIRMAN: You are not an engineer.

MR. SHAKESPEARE: No.

THE CHAIRMAN: Perhaps you do not know. If you could give us a memorandum that you would file as a supplement to your brief, I think we would appreciate it.

MR. SHAKESPEARE: I am thinking of the British Columbia cellulose logging operation at Terrace. They are supplied by the CNR for all the logs that are required for their mills which is in Prince Rupert and a lot of logging is done in connection with the railway for their existing rails. That timber goes by railway over the long haul -- what is it -- seventy miles or so from Terrace down to Prince Rupert.



Likewise if there were rail along that line it possibly would not be necessary to extend unduly the length of transmission lines because presumably a mill would be established at a central point and the logs could be brought down by rail and road wherever suitable depending on the distances to the mill.

COMMISSIONER GAINER: Does electric power help in logging operations?

MR. SHAKESPEARE: It is not used extensively in the actual logging but in the milling.

COMMISSIONER GAINER: Only in the milling?

MR. SHAKESPEARE: No, not only for use in the milling; plain mills, saw mills.

COMMISSIONER GAINER: There are now mills in Grand Prairie.

MR. SHAKESPEARE: Yes.

COMMISSIONER GAINER: It has not been contemplated that there will likely be mills developed in the town of Peace River -- the lumbering industry north of Peace River?

MR. BALDWIN: I would doubt it, not right in the town of Peace River or even adjacent to the town but along the river itself using such places where the river might be required. I have a map here which along the lines of questioning you are pursuing Mr. Shakespeare may be able to work from that. This is a map which shows British Columbia, the northern part of British Columbia and the northern part of Alberta. It shows Hudson Hope



and there is a legend showing the scale and using that Mr. Shakespeare may be able to -- we found it carried 200 miles from Hudson Hope to include -- well, within 40 miles from High Level. Perhaps you could use that map and get some indication as to the extent of the power produced at the Hudson Hope plant and set into the local utility companies that might be used at a very substantially reduced rate and cover this potential timber area. That is the only map I have been able to find.

THE CHAIRMAN: Did you follow what Mr. Baldwin said?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: Will you outline it, Mr. Baldwin?

MR. BALDWIN: If I may put it this way: This is the boundary and in the evidence we had yesterday there was an indication that was not this area.

THE CHAIRMAN: Around Keg River?

MR. SHAKESPEARE: That is only 200 miles.

MR. BALDWIN: That is 200 miles from the source.

MR. SHAKESPEARE: Well, we just do not draw concentric circles to determine the availability of power. The dominant thing that is more important is the existence of a transmission line.



A small mill would not ^{warrant} construction of 100 miles of line but it might ^{warrant} the construction of 20 miles or so. It would be a case of getting a transmission line established. There would be no problem transmitting it this far.

MR. BALDWIN: It would be within the range -- you would be without the range of the high power transmission.

MR. SHAKESPEARE: Oh, you mean a high voltage?

MR. BALDWIN: Yes, I was thinking of the additional cost.

MR. SHAKESPEARE: No, we would not have such a high voltage transmission line as that because it would not pay just for that small requirement.

MR. BALDWIN: But you would fit into a local utility, it would be available at a distance that far north?

MR. SHAKESPEARE: Oh, very readily and further.

THE CHAIRMAN: You spoke of a good system, there is a line going as far as Manning, is there not?

MR. SHAKESPEARE: Is that the grid showing there?

THE CHAIRMAN: No, it is not.

MR. SHAKESPEARE: Well, we have that here,



this one and that one (indicating). The purple ones are all grids.

THE CHAIRMAN: Here we are from the Peace River on to Manning.

MR. SHAKESPEARE: The scale is up here -- 60 miles, it looks to go about 60 miles north of Peace River if this map is up to date.

THE CHAIRMAN: Yes. Now, is this correct that if you were going to provide power at Manning and north of Manning you would put it into the power line which goes down to Grand Prairie and on up along the course of this green line and then the blue line then north?

MR. SHAKESPEARE: That is right.

THE CHAIRMAN: Then, you may find it was difficult to extend the line from Manning to Keg River that Mr. Baldwin referred to, which is about 60 or 70 miles further north?

MR. SHAKESPEARE: No, if there was an important user of power up there the utility company would put a line in under some agreement, maybe two or three settlements and so on.

THE CHAIRMAN: Is that the sort of thing that might assist the lumbering industry?

MR. SHAKESPEARE: Oh, very much so.

THE CHAIRMAN: Would you be able to provide power at a much lower rate for lumbering around Keg River than it has now?



MR. SHAKESPEARE: I do not know the rates now but if they are using diesel then very definitely it would be less cost 'because that is expensive.

MR. BALDWIN: There is some diesel and some gas; gas is being used at Fairview and diesel at Peace River. Perhaps that has been discontinued. If I were to answer that question I could make some very interesting comments.

THE CHAIRMAN: Well, will you? We want the facts and if you can help us we would appreciate it.

MR. BALDWIN: Well, in Mannning, and I am speaking from the viewpoint of an individual user, in Manning and the town of Peace River there is no doubt about it that it is exceptionally high. I have listened to what Mr. Shakespeare had to say and I read some comments on his project. I do not think there is any doubt about it, there is no power at all in Cape River but the power in Manning would be substantially reduced being carried over north 60 miles the benefits would be available to Cape River at reasonable cost for the territory.

THE CHAIRMAN: Mr. Shakespeare, can you and Mr. Baldwin see if you could, between you, let us have a memorandum indicating what power advantages might be hoped for in the area of Manning?

MR. SHAKESPEARE: Yes, we could. Any-



where they are using diesel -- I am not a lumber mill -- a lumber mill hesitates to establish anywhere that is using diesel, because it is so costly and any where they are using diesel I am sure the rates would be greatly reduced just as they will be greatly reduced at Port St. John and Austin Creek.

THE CHAIRMAN: Will they be reduced enough to make it attractive to a lumber mill?

MR. SHAKESPEARE: Probably cut in half.

THE CHAIRMAN: Does that make enough difference to encourage lumbering?

MR. BALDWIN: This sounds very interesting, Mr. Chairman.

MR. SHAKESPEARE: The power bill of a lumber company is quite an element of cost.

THE CHAIRMAN: Well, this discussion has arisen out of my asking you what the connection is between your project and the railroad.

MR. SHAKESPEARE: That is right.

THE CHAIRMAN: I want to come back to this but Mr. Thompson has a question he wishes to ask you.

COMMISSIONER THOMPSON: No, you go ahead and ask your question.

THE CHAIRMAN: I do not know whether it has any direct bearing on a proposed railway or not but perhaps it means that the lumbering industry will get



along so well with the cheaper power they may not want a railway. It may not have an important bearing on it. What other connection is there, in your opinion, between your power development and the proposed Slave Lake Railway?

MR. SHAKESPEARE: Well, a very important one so far as we are concerned is this, that if we get to the point of considering at some future date the development of some of the sites along the Peace River in Alberta the economics of it will be determined, perhaps entirely, on whether or not there is another access. I know what it means in building a project without having access by rail and/or road. It is a very serious matter in regard to cost and if your costs are high it may well be that access by rail somewhere near where these sites will appear along the Peace River will very possibly be a determining factor on whether they can or cannot be built.

THE CHAIRMAN: That is all on the Peace River you are speaking about?

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: You explained that all very nicely to us, but what about the Northwest Territories. There is going to be access to the Northwest Territories when the Slave Lake Railway is completed and the question is where is the access



to come from. The question we have to face is where the access comes from, from the waterways or from the Grimshaw area.

MR. SHAKESPEARE: Are you speaking of power developments in the Northwest Territories?

THE CHAIRMAN: I am wondering what your plans have to do with the railway?

MR. SHAKESPEARE: That would depend entirely on whether there are several users of domestic or industrial to make it worth while to establish a power development there for the few users. You see, we have a diversified use whether we are producing it in the Peace River Canyon we can utilise it for a variety of requirements and services, several different utility companies and the various alternative routes. We have not given any thought to establishing a power development in the Northwest Territories. That point just has not arisen and the cost figures would be very much higher in that area because of remoteness.

THE CHAIRMAN: But, can the power you develop assist in the Northwest Territories?

MR. SHAKESPEARE: Well, the power that we develop at this particular project we are talking about now would only help, as I see it -- it could only be used in the Northwest Territories if the grid system was extended that far. That is, the existing



Alberta and British Columbia grids were extended and there is perhaps no reason. It is a matter of dollars and cents and perhaps time and then perhaps those grids will be extended.

THE CHAIRMAN: Well, coming back to the map again; one proposal is to have a railway along here (indicating) and another proposal is along here (indicating). Now, you can take your power up to Great Slave Lake whether there is a railway or not because there is a highway.

MR. SHAKESPEARE: Well, there is a highway and it is important for building a transmission line.

THE CHAIRMAN: It would probably serve all the purposes required for building your transmission?

MR. SHAKESPEARE: When I speak about a line going to the Northwest Territories, I do not know how long that would be but it would almost as long as the transmission line to Vancouver. The only reason for building the line to Vancouver is for the tremendous requirements in the lower area. There would be no purpose in spending that money to reach one small place in the Northwest Territories. It would require tremendous requirements to go that far.

THE CHAIRMAN: Do you think it would be better to build a railway on one side, say, the west side rather than the east side or vice versa?

MR. SHAKESPEARE: Well, whatever would



provide us with customers, whichever would provide us with access for future development or sites. Certainly this would be quite a long way away whether for either -- well, the easterly route would be quite far away.

THE CHAIRMAN: Has there not been -- have you not considered a compromised route going this way?

MR. SHAKESPEARE: Yes, that has been suggested. Any rail connection that would touch on places along Vermilion Chute would be interesting from our point of view and of great interest for possible development of the Province of Alberta and everybody concerned.

THE CHAIRMAN: There is a highway being built already along the northshore of the Peace River.

MR. SHAKESPEARE: Yes.

THE CHAIRMAN: Which would provide access to Vermilion Chutes if you want to make that a power site.

MR. SHAKESPEARE: It is our present plan, of course, to have both the rail and road connections. We expect this extension of the P.G.E. to be built and utilise that in the construction as well as the road access from the Hart Highway.

THE CHAIRMAN: This suggestion has been made and perhaps we should wait until it has been advanced to us by the author of one of the other briefs but



with that area development taking place on the Peace River there may be a smelter built there and that ore from the Northwest Territories could go to that smelter.

MR. SHAKESPEARE: That would be one of the most attractive things from our point of view to have somebody to put in a smelter to utilise power because they are usually a tremendous consumer of power, particularly this kind of electrolithic one. The amount of power is tremendous.

THE CHAIRMAN: You have not dealt with it in your brief.

MR. SHAKESPEARE: Yes, I touched on it in the brief in regard to the uranium and the establishment of a smelter to treat the ores from Northern Alberta, the Northwest Territories and parts of British Columbia. That would be a major consumer of power and they are therefore vitally interesting as far as we are concerned.

THE CHAIRMAN: Where is it in your brief?

MR. FOUKS: Page 4 at the bottom of the brief.

THE CHAIRMAN: Thank you. Those are all the questions I have to ask.

COMMISSIONER THOMPSON: I have nothing more.

THE CHAIRMAN: Any other questions?



MR. FEEHAN: I have one question. It is not really too relevant, but just as a matter of interest I was wondering whether or not the power would be produced winter and summer at the proposed site.

MR. SHAKESPEARE: Oh, very definitely, yes. We wouldn't be interested in having it to produce seasonal power. The nature of our project is to establish storage so that the power developed is continuous, because it is only continuous power which has any economic value.

MR. FEEHAN: I was wondering about the icing conditions in that north country. Would that not give you a problem?

MR. SHAKESPEARE: I don't anticipate any serious problem, because the dam will be 600 feet high, the penstocks will enter at an elevation of several hundred feet below the surface, and I don't expect the ice will be several inches thick.

MR. FEEHAN: Neither the Slave nor the Peace completely freeze during winter, or do they?

MR. SHAKESPEARE: I think the rapids of the Peace don't freeze.

MR. FEEHAN: Well, wouldn't you get a piling up of ice during the winter?

MR. SHAKESPEARE: You mean below the dam?



MR. FEEHAN: All along the river?

MR. SHAKESPEARE: You mean above, in the lake, in the reservoir?

MR. FEEHAN: The point is, if the water keeps coming down during the winter it is automatically going to freeze as soon as it gets into the river bed?

MR. SHAKESPEARE: No. It will be like a river containing 35,000 cu. secs, so it will be less apt to freeze, and if the river has never been chock-ablock with ice during the low flow, therefore it wouldn't be blocked up during the more extensive flow.

THE CHAIRMAN: Thank you very much, Mr. Shakespeare.

We will adjourn now until two o'clock.

---Luncheon adjournment.

(Page 85 follows)



SUBMISSION OF

R.J. JONES

Appearances:

E.J. Jones

Gentlemen, during my earlier life, I have travelled rather extensively through our great north country. At that time I was running a trap line over the Caribou Mountains, and later on far into the interior of the Birch Hills. While trapping in these areas I had an excellent opportunity to observe the beauty and resourcefulness of this fabulous land. Transportation during that period was done by dog team and horses. From this, one could visualise the enormour value of this unexplored land.

Since the terminal for the extension of the railway is to be at Pine Point on the south east shore of Great Slave Lake sooner or later, I will predict that a railway will be built from Waterways, as we have an outlet from Lower Hay River, which could be paved, to "Grimshaw," where the railway now exists

One would have to travel on foot in order to realise its true value as I have. Following is a fairly good description: On the southern slope of the Caribou Mountains down stream from Fort Vermillion,



there are numerous small prairies, rich in black humas soil. Timber can be found for miles; mostly spruce, tall and almost branchless through the main stem. On the north slope of the Caribou Mountains free gold has been found, but due to the rough terrain and the countless insects during the summer months no one has spent much time prospecting there. Indians know there is gold, but they try and keep it a secret, as it might jeopardize their hunting grounds if people moved. A Brother of the Roman Catholic Mission at Fort Smith, North West Territories made an over-land trip to Fort Vermillion in the early nineteen hundreds and collected a sizeable amount during his trip, but he staggered into Fort Vermillion in a state of starvation and exposure, and soon passed away, before anyone could find out where he had found this small fortune.

Along the south side of the Peace River down stream one will find mile after mile of the finest grassland, flat country, several species of upland and slough grasses, where cattle could be raised in countless numbers.

Timber births along Peach River, the "Mukaw" Loon River, the "Mikeaw" Red River and the Birch River have standing timber that one would have to see, in order to appreciate its true value. These stands of timber extend far inland in



numerous places.

On the Peach River there is only one obstruction; the Vermillion Chutes and Rapids. These can be managed. I've taken scows over the Rapids and Chutes, during the gold rush at Yellowknife for prospectors.

Just image the advantage if the railway were built from Waterways. All river run down stream; each and every one could be used for transportation, not only for log drives, but for all materialistic things. If it were not for the sixteen miles between Fort Fitzgerald, Alberta and Fort Smith, N.W.T. These rapids are impossible to navigate, as they spread out too much. Therefore a railway from Waterways will eventually be necessary. There are two good places where a bridge across the Peace River is feasible. One at Big Island, just below where the fifth meridian crosses and another exceptionally good spot a short way upstream, from where the Peace River becomes the Slave River. It narrows down so greatly that one could just about throw a stone across. The footings here are of solid rock.

Back inland from Big Island on the Birch River, tar sands are exposed in several places. Timber along all these river's course are immense. A raft of logs could serve a double purpose of



downstream transportation. First, bringing stock to the railways and secondly, transporting any other type of materials that are needed elsewhere.

There is no doubt in my mind that sooner or later this area will be opened up. It is a shame to see the abundance of timber and endless square miles of grassland laying dormant. Fire, this year, destroyed considerable timber in the Birch Hills already. A railway through this territory would create a new frontier that awaits the arrival of not only now, but for further generations to come and bring as added prosperity to a rich country that lays unheeded.

J.R. Jones
10980 - 125 Street
Edmonton, Alberta.



--- Upon resuming at 2.00 p.m.

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THE CHAIRMAN: Mr. Jones, you have a brief for us?

MR. JONES: Yes.

THE CHAIRMAN: Where would you find it convenient to read it to us? There is a witness box here.

MR. JONES: Well, if it is all the same to you, sir, I don't need it.

THE CHAIRMAN: All right, that is fine.

MR. JONES: I have a few notes that I can follow.

THE CHAIRMAN: That is first rate, however you like to give us your story.

MR. JONES: Sir, I don't know exactly what you would like. I will give you a description of how I found it, the territory, back in northern Alberta.

THE CHAIRMAN: We have to inquire into and report on the alternative merits of two routes, or any other routes there may be, so far only two have been suggested to us, two proposed routes for a railway into the area south of Great Slave Lake. If you have any information or help you can give us on that question we are very grateful.

MR. JONES: I will do the best I can. Shall I proceed?

THE CHAIRMAN: Yes, you go ahead and give us your case in your own way.

MR. JONES: Personally, I don't think it is



going to do me any good but for the future --

THE CHAIRMAN: We are interested in what good we can get for ourselves.

MR. JONES: Well, now, all this territory I have travelled over so I know just exactly. I could take you any place I mention and show you in black and white. Of course, there has been some fires lately and quite a few years ago and I am more or less a naturalist and I hate to see good timber going up in smoke.

With your permission I shall treat it the best I can. I feel a little out of place. I have never done this before. South from Fort Vermilion I have been right as far Owl River. You have to cross the Loon River commonly known as the Mikeaw River. There are several prairies in there. One is called Tall Tree Prairie. It is about 500 acres of very rich soil, practically all river bottom. In the spring of the year, if there is a heavy fall of snow, it is floods and needs a drainage. In about a month or so it all disappears. Between Loon River and Red River there is timber you have never seen anything like and a lot of slews. Not so many, but there is a lot of good slews, good grass country. The timber is magnificent. Crossing the little Red River, known as Mikeaw River, down east and south both there is thousands and thousands of acres of the finest grassland you have ever heard of. It goes right down past Big Island across the fifth meridian, the 27th



Base Line and south of the 27th Base Line. The fifth meridian crosses over near Big Island and comes to the 29th Base Line right close there. In between all those points there are patches, large acres of timber that you would not even believe unless you walked over it yourself. It is tall and branchless, all on the south side of the Peace River and the Loon and the Red River. Then we come to the Birch. The Loon is the first one down, 30 miles down from Fort Vermillion.

COMMISSIONER THOMPSON: Do you mean the Wabiskaw River?

MR. JONES: That is the Wabiskaw. It changes name. It should be the Mikeaw. That is Red in Cree, and the Mukwa.

THE CHAIRMAN: The Birch goes to Lake Claire?

MR. JONES: Yes.

THE CHAIRMAN: The others go north to the Peace?

MR. JONES: Yes, but the Birch enters Lake Claire. Now, I have never measured it but it is about 300 miles, I would say, not quite. Up from Big Island on the Birch River we come into the high hills in the Birch River itself and there are several scenes of tar sands that come right out.

THE CHAIRMAN: Where is that?

MR. JONES: That would be about 10 miles



up the Birch River from the 27th Base Line. It would be halfway between the 26th and 27th Base Line. An old map would show a trail from Lake Wabiskaw across the Birch to what is called Gun River. There should be a mark on the map. I know it used to have one.

THE CHAIRMAN: Are those outcroppings of oil sands comparable to Athaska?

MR. JONES: No, on the Birch River.

THE CHAIRMAN: Do they look as good as Athabaska?

MR. JONES: I will tell you, I went through there in the spring when the sun hits the cutbank. It happens to be facing the cutbank and the oil seems to ooze out. It is that rich.

COMMISSIONER GAINER: Generally, what are the proportions of timber, what kind -- black poplar, spruce?

MR. JONES: It is mostly spruce.

COMMISSIONER GAINER: Being low, fairly low.

MR. JONES: No, they are very tall.

COMMISSIONER GAINER: I mean the land is low.

MR. JONES: No, it is quite high there.

COMMISSIONER GAINER: You are still on spruce.

MR. JONES: You are still on spruce, not



jackpine. There is a stream called the Stinking River from Red River about 30 miles. It would be south east of Little Red River below the Vermilion Chutes in there. There are stands of jackpine that you would not believe it. You couldn't get your arm around lots of them.

COMMISSIONER THOMPSON: If there is all that timber there why don't the maps show it? It has been well cruised.

MR. JONES: I don't know why.

COMMISSIONER GAINER: This would be in the Park?

MR. JONES: No, a long ways from the Park. This is between Birch River and the Little Red River. I could take you right there. There's I don't know how many acres there would be. It takes me about an hour and a half when the trail is good to go through there with a dog team. My dogs travel pretty fast.

THE CHAIRMAN: Why were you there?

MR. JONES: Trapping and trading for 25 years and then I got married and I had to find an education for my children, which I lost out on myself. I didn't want them to have the same thing happen to them as happened to me.

THE CHAIRMAN: Where would you think the railroad should go if it is going to the south shore



of Great Slave Lake?

MR. JONES: If you will let me finish -- I want to keep on the one side of the river for the time being, on the same side of the river. If the railroad should go through there is a place where the Peace River becomes the Slave River. They are two streams on your map. You will find a good bush that comes from Lake Athabaska into the Peace River and the other channel comes into what is commonly called Slave Lake. That is the other channel. The other channel is the one the boats use for steamboats. When the Peace River is low the water runs in from Lake Athabaska on the small channel. When the Peace River is high the water runs into Lake Athabaska and comes out on the other channel. Right at this particular place you can throw a stone across if you have a good arm. While I would not want to commit myself right down to a yard it would not be any more than about 150 yards wide. It is a good foundation for anything. That is where the start of the granite rock is.

Now we will go upstream. Now, upstream there are about 100 miles and we got to what is commonly called the Little Jack Fish River that comes out on the north side of the Peace River. Now the Indians -- I know the chief and he showed me that he had found gold up there and they don't want any-



body to go in there because they figure that it would hurt their hunting grounds. I am not sure whether I mentioned this in my brief or not, but there was a Brother that left the Fort Smith Roman Catholic Mission and made that trip from the headwaters of the Jack Fish and landed into Fort Vermilion early in the start of the 19th century and he died of hunger and exposure. They found -- I don't know how much it was -- but it was a considerable amount of gold that he had with him in his pockets.

Now, further up from there we come to what is commonly called the Big Slew. All along both sides of these streams the timber is almost impossible to describe. I had to cut off a flagpole for the Hudson Bay Company at Fort Vermilion. I couldn't give it to you by the foot but it was 65 feet tall and 6 inches in the top and only 13 inches at the butt. That is 65 feet. You can imagine how tall they grow. It is along the water course mostly, of course.

There is another stream that comes out below Fort Vermilion Chutes. I forget the name of it. There is a prospector who made two different trips up there, Mike Malone, and he found considerable gold flecks but not enough to warrant further prospecting because on account of so many flies and mosquitoes,



they are really bad, especially up in that country.

In the meantime all the timber along there -- one would have to go through all that timber in order to realise its actual true value.

Now, along the foothills of the north side of the Caribou Mountains we come to a good size prairie, John Deer's Prairie, and further west there are numerous other small prairies, just kind of long and narrow along the bottom of the foothills and further down. It is sort of funny, you know what I mean, long and narrow like. The soil is wonderful because I dug up a little patch about 20 foot square and I lay some potatoes in there and in the spring I came through from hunting. I had a cabin back up in there and I got a sack and a half of potatoes out of that little tiny bit.

And now there is lakes that are old river bottoms. Where the Chutes come over there you can still see the lake and the Chutes still there which goes to show you that it was actually a river bottom. I don't know how long ago, I don't know how long ago that would be but there's fish in it, just kackfish in some of these lakes. That is near the bottom of the lake.

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MR. JONES: I guess I didn't do a very good job in describing it.

COMMISSIONER THOMPSON: When you are talking about the Birch Hills do you mean the Birch Mountains?

MR. JONES: Yes, sir.

COMMISSIONER THOMPSON: I see you had it down twice as Birch Hills. The Birch Hills are away over in the other part of the country and you say Birch Hills here.

MR. JONES: Yes.

COMMISSIONER THOMPSON: You mean the Birch Mountains?

MR. JONES: That would be on the south side of the Peace River.

COMMISSIONER THOMPSON: Yes. The Birch Hills are away over on the other side of the country.

MR. JONES: I still have several cabins there that I have had to leave.

THE CHAIRMAN: You have given us a good description of it, Mr. Jones. We have your brief
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MR. JONES: I didn't give you it exactly the way I wanted to.

THE CHAIRMAN: Well, we are concerned about where the railways go. You cannot go into all the details.



MR. JONES: There is one other thing I would like to mention.

THE CHAIRMAN: Very well.

MR. JONES: Thank you, sir. There is one more thing I would like to mention. I have been out on the other route so I don't doubt it is very good but there is only about one hundred -- I don't think it is more than one hundred miles -- where the railroad would be actually feasible because the other part of that road -- you go into country that is muskeg and it has no agricultural value.

There is some timber but an awful lot of it has been burned. You take by having the railroad from Waterways you have all these streams and it is a simple matter to float down -- stream to the railroad terminal. You could haul anything. Do you know, Mr. Manning, sir, that I made a raft of forty logs at the bottom of Vermilion Chute and I took this raft with my brother and a fellow called Dick Wynn 250 sacks of potatoes. We took them down to Fort Fitzgerald on this raft. There were times I had to use sail in order to get off the rocks but we never got stuck once all the way down. So you see how important the railroad is because all these streams, the Birch, the Loon and the Mikeaw -- and when the gold rush was at Yellowknife I



portaged -- not portaged -- I floated scows over the rapids and chutes because 300 yards in the river there is a place where there is no drop in the chutes. It is just a regular chute and by sitting that you just go floating right down without touching anything. The power that could be got out of the Vermilion Chutes is quite large -- I don't know anything about that -- I don't know whether it could be of great value but the river widens away out at that particular place at the rapids and it would take very little to divert the water to one side.

THE CHAIRMAN: Thank you very much, Mr. Jones.

MR. JONES: Oh, yes. There are several cutbanks on the Peace, some at the Chutes. There is one above the Chutes and several below the Chutes. I don't know what value they are but the clay is red and the Indians used that for making chimneys in their shacks and it doesn't seem to crack. It is some wonderful material that is in the ground.

THE CHAIRMAN: Mr. Feehan, have you any questions that you would like to ask Mr. Jones?

MR. FEEHAN: I was wondering if Mr. Jones could tell us if he has ever travelled the Slave River area to, say, right down beyond Fort Smith?



MR. JONES: I have piloted for Hudson's Bay right down to Shingle Point, Hershey Island, Aklavik, the Arctic Red River. I was a cook for one year on the Liard River, the MS Liard River, a motorboat.

MR. FEEHAN: Have you ever had an opportunity to do any prospecting in the Pre-Cambrian Shield at the vicinity of the Slave Lake?

MR. JONES: No, sir, I have never bothered. I almost did that time that the platinum strike was on but I knew the man that was sponsoring it and he told me it was a fake so I didn't go any further.

MR. FEEHAN: Your experience -- and it has been a very broad one, Mr. Jones, in there ---

MR. JONES: I am a naturalist. I observe all this wood and wildlife.

MR. FEEHAN: Your experience is concentrated in what would be the central area between the two proposed rail routes?

MR. JONES: That is right, sir. That is what the territory that I have described is and I have walked over it myself or driven a dog team. That is what I know and I could take you over it. I have been right up to where the Birch River forks. There is two little streams and there is a lake on the lefthand fork. I



don't know the name of it. They call it Birch Lake. I don't know what it is. It is just over the muskeg.

MR. FEEHAN: I have nothing further,
sir.

THE CHAIRMAN: Thank you, Mr. Jones.
We are glad to have had your brief.

MR. JONES: I hope I did some good.
This was not the way I intended to describe it.

THE CHAIRMAN: We have another brief.

MR. JONES: There is one thing more.
The reason I know that there is minerals is because I have done some investigating of this creek. Every time there is an electric storm of any kind you can see the lightning striking in that particular area constantly. It is very much mineralized; and the same with the other side -- the north side of the Cariboo Mountains. There is an amount of mineral there because you can almost see a tree here and another one there that has been shattered by where it has been struck by lightning. That is some indication for minerals.

THE CHAIRMAN: Thank you again, Mr. Jones.
Our next brief is at three o'clock. I think we shall adjourn now until three o'clock. If I could see Mr. Fouks and Mr. Feehan and Mr. Baldwin; we have a small procedural matter we would like to discuss.

---Short recess.



SUBMISSION OF
SWANSON LUMBER COMPANY LIMITED

Appearances:

Mr. A. J. Hamilton

Mr. T. Matty

THE CHAIRMAN: Yes, Mr. Hamilton?

MR. HAMILTON: Would you like me to
read the brief or ---

THE CHAIRMAN: Well, whatever you
like, if you want to elaborate on it as you go
along.

MR. HAMILTON: Very well.

Swanson Lumber Company Limited makes
this submission in support of the Waterways
route for the railway to Pine Point.

Our comments are confined to the impor-
tance of the railroad to lumber operations on
the lower Peace River in Wood Buffalo Park.

We are leaving it to other people
with other interests to make their submissions.

The Government of Canada has granted
to lumber companies licences to cut an estimated
one and one-half billion feet of western white
spruce and poplar in Wood Buffalo Park. One
of the licences contemplates the manufacture of



plywood from this spruce and from some substantial stands of poplar in the area.

I might say the licences are for an estimated 1,300,000 feet of spruce and 160,000,000 feet of poplar, which make up the total of the billion and a half feet.

There is additional spruce timber in the area, notably about two hundred million feet on the Birch River.

Have you located the timber on the map because it is important to the discussion. The timber is located in this area here and right up to Big Island.

THE CHAIRMAN: On the south shore of the river?

MR. HAMILTON: Both sides of the river and all around there.

THE CHAIRMAN: Around there and falling out to Big Island?

MR. HAMILTON: Yes, and Scow Channel in here and Swanson has the timber here.

THE CHAIRMAN: Where is Peace Point?

MR. HAMILTON: It cuts the birch timber that is under licence almost in half, about the same amount east as west.

THE CHAIRMAN: There is a lumber mill?

MR. HAMILTON: No, the timber is held here to Mr. Denny and he has put his mill at Fort



Fitzgerald. With a railroad mills would tend to go towards the railway. At the present time both mills are on the river.

COMMISSIONER THOMPSON: Your mill is where?

MR. HAMILTON: Right almost exactly there (indicating).

COMMISSIONER THOMPSON: On the south side?

MR. HAMILTON: Yes, and our timber holdings are immediately adjacent to it within perhaps five miles of there.

COMMISSIONER THOMPSON: And where is the Denny mill?

MR. HAMILTON: At Fort Fitzgerald.

COMMISSIONER THOMPSON: And their timber?

MR. HAMILTON: Partly on Scow Island all the way up here.

COMMISSIONER THOMPSON: Going through yours up here?

MR. HAMILTON: Right up to Big Island and roughly three-quarters of a billion feet in this area and three-quarters of a billion feet here.

All of this timber is classed as mature and over mature, and in the experience of this company it is proving to be over mature. Competent foresters consider that it should be cut



as soon as possible. They also believe that if uncut these timber stands would quickly deteriorate, would constitute a serious forest fire hazard, and would also be a suitable host for harmful insect infestation.

I would think within fifty years most of that timber would be completely destroyed.

The main timber in this area lies one hundred and sixty miles north of Waterways, and since the market for the lumber produced in this area is mainly in eastern United States and eastern Canada this means that the lumber must be shipped by barge to Waterways, and then transferred to railway cars for shipment to its ultimate destination. At the present time we consider that lumber operations in this location are marginal, or even a losing proposition, and there is a real possibility these operations will cease or be greatly curtailed. As previously stated this timber is mainly overmature so that any delay in its development will result in the dissipation of an important natural resource.

I might say that this is the fourth year we have operated in this location and we have lost money almost every year substantially.

In our opinion the location of the railway north from Waterways crossing the Peace River at Peace Point would make lumber operations



in Wood Buffalo Park economically sound. At the present time if year round shipping were available there is a productive capacity of some forty million feet per year. That is, at the present time the capacities are already built there.

THE CHAIRMAN: That is the present fifty million now?

MR. HAMILTON: No, that is the present capacity, the present shipments are very much lower. The present capacity if there were a railroad could be forty million feet a year on cars within a year if the railroad was built.

THE CHAIRMAN: What is the present production?

MR. HAMILTON: Our production this year is seven million feet.

THE CHAIRMAN: Do you know what Denny's is?

MR. HAMILTON: I don't know, but he has shipped none south this year. His production is relatively small.

THE CHAIRMAN: Does yours all go south?

MR. HAMILTON: No, about one and a half million has been sold in the north this year and the balance in the south.

THE CHAIRMAN: One and a half in the north?

MR. HAMILTON: Yes, the market for



lumber in the north is extremely limited.

THE CHAIRMAN: Five and a half million south?

MR. HAMILTON: Of that general order, yes. Of course, any additional production all has to go south because the northern market is filled at the one and a half million. We would love to sell more up there but that is the total market. We have competition in the north from Denny and from Hay River. Our sales to the north are mainly to Uranium City and that vicinity.

COMMISSIONER GAINER: How do you mean the market in the north is limited? You would not mean in total necessarily?

MR. HAMILTON: Yes, in total consumption of lumber in the north. I don't know what it might be but five million feet a year seems fairly high to me as to what they might use. That is in addition to Eldorado who cut their own, which is a fairly substantial amount, too.

COMMISSIONER GAINER: Does this have to do with the location of your mill?

MR. HAMILTON: No, the consuming area, the consumption of lumber in Northern Canada. The population is small and they just do not use spruce lumber.

COMMISSIONER GAINER: Denny's cut has not been very large this year?



MR. HAMILTON: No, he has probably cut two million feet this year, something of that order.

COMMISSIONER GAINER: And it has all stayed north?

MR. HAMILTON: Or he still has it at hand, I don't know which. If operations are going to expand there is only one way to expand and that is by shipping the product south.

An annual production from that area of fifty million feet for the next thirty years could be expected.

From the two mills that are there and if more mills could be up there, fifty million feet would come out each year very normally, and I think I am being conservative.

It is difficult to estimate the value of operations of this scale to the development of Canada as a whole and Northern Canada in particular. Fifty million feet of spruce lumber has a sale value in Eastern markets of about \$4,750,000 at present prices. It represents 1,600 cars of freight to the railway or approximately \$1,350,000 of gross revenue. It would provide year round employment for approximately 450 men with an annual payroll of some \$1,250,000, a large part of which would go to native residents of the north who otherwise



would be either wholly or partly a public charge, apart from the social and psychological advantages of giving the natives a useful and productive occupation. In addition where there is a direct payroll of this size there is a considerable impetus to the development of other activities to provide supplies and services.

The following are some of the reasons for the importance of the railroad to these lumber operations:

1. The local market for lumber is small, and we would estimate that at least ninety per cent of the annual production from the area would go to eastern Canada and eastern United States.

So out of fifty million I was estimating forty-five million would have to be shipped to eastern Canada and eastern United States.

Freight rates from Waterways to eastern markets are more or less the same as freight rates from any other point in Alberta and British Columbia, all being on the same uniform Spokane rate.

That is, Waterways to New York has the same freight rate as Edmonton to New York and Spokane to New York and if the railway went to Peace Point it would be the same from Peace Point or very close. That is the nature of the



rates in the lumber industry.

THE CHAIRMAN: So if there ever was built up there a railway the freight rate would be the same, you think, from Peace Point as from Waterways to the market which would absorb about ninety per cent of the production?

MR. HAMILTON: Yes.

COMMISSIONER THOMPSON: I would like to ask you a question. You say there is no market for lumber in the north?

MR. HAMILTON: Not a big market.

COMMISSIONER THOMPSON: And this railroad that is to be developed, presumably that is being built to develop the north and yet you say there is no lumber in the north, and you send it all south. Just explain if there is no market for the lumber in the north, you develop the railroad and turn around and send the lumber south. Am I inconsistent?

MR. HAMILTON: I think perhaps the difference is in quantities, fifty million feet is a lot of lumber, fifty million feet is 3600 railway cars of lumber.

COMMISSIONER THOMPSON: Well, are we not too previous in developing the north?

MR. HAMILTON: No. This is a natural resource and this part of Canada has always been an exporter of natural resources and we would



produce far more lumber than we could use. That is the normal stage of our economy. Another two million feet of lumber would be a lot of lumber in the development of the north.

COMMISSIONER THOMPSON: Well, it still does not seem to be consistent. I mean, why are we lumbering there at all if we are sending it all south? Why not lumber in the south instead of going up there and bringing it all the way back?

MR. HAMILTON: It is a natural resource that will be dead in twenty-five to fifty years if we do not take it out.

COMMISSIONER THOMPSON: Is it not a national park and is it not supposed to be left as nature put it there?

MR. HAMILTON: I would not subscribe to that.

COMMISSIONER THOMPSON: Well, why do you establish a national park?

MR. HAMILTON: This lumber is decaying.

COMMISSIONER THOMPSON: Well, lumber in all national parks decays, does it not?

MR. HAMILTON: You have no regeneration at all because of stands that are over-mature.

COMMISSIONER THOMPSON: Do you think a national park should be excluded for an individual or corporation or be left as any other park, to be left to grow just as nature intended it to be



so that we have some of our primitive forests and natural scenes left? If you let them in lumber will you let them in mining? If you are going to do that then why make a national park? What do you think about that? Is it justifiable? If you do take it out of a national park should not the profits be thrown into the coffers of the treasury for the good of the natives? You say something about the good of the natives. Should not all the profits be thrown in?

MR. HAMILTON: Well, so far quite a bit of the profits plus some of our money has gone to the natives.

COMMISSIONER THOMPSON: The point is, if you had made a great deal of money would you have given it to the natives?

MR. HAMILTON: They would have got their wages and the government would have got stumpage.

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COMMISSIONER THOMPSON: Granted, but do you subscribe to the idea of going into national parks?

MR. HAMILTON: I subscribe to the idea of going into this timber which is rotting away. I don't think it is an asset to the country to have timber that is rotting. It is a serious forest hazard.

COMMISSIONER THOMPSON: Are you going to make it a national park or are you not going to make it a national park?

MR. HAMILTON: I think you are getting into government policy to a certain extent. I am trying to outline the economics in relation to this position.

Did I answer fully your question as to why the timber should come south? Two or three million feet in the development of the north is a lot of timber, a lot of lumber, and fifty million feet just can't be used in that country.

I was in the middle of paragraph 1.

However, as previously stated, operators in Wood Buffalo Park must barge their lumber to Waterways and transfer it to cars at this point. The cost of barging and handling at Waterways is approximately \$9 per thousand. This \$9 per thousand could be almost completely eliminated if the proposed railroad were built from



Waterways. A railway north from Grimshaw, however, would be approximately two hundred miles west of the timber and would have no significance whatever.

I should emphasize that at the present time there is no highway of any sort connecting this location with Waterways. The only communication is by barge and aeroplane.

COMMISSIONER THOMPSON: How far is it from your plant, how many miles?

MR. HAMILTON: It is 160 miles by air.

COMMISSIONER THOMPSON: And that costs you \$9 per thousand. Your actual barge price is about \$7.50?

MR. HAMILTON: Per thousand it would be approximately \$6.60.

COMMISSIONER THOMPSON: How much do you pay going from McMurray into Edmonton?

MR. HAMILTON: We have to take it off the barge at Waterways and put it upon the bank and put it on railway cars.

COMMISSIONER THOMPSON: How much do you pay to get it from Waterways into Edmonton?

MR. HAMILTON: We ship right past Edmonton, we ship to New York.

COMMISSIONER THOMPSON: How much from Waterways to Edmonton?

MR. HAMILTON: We haven't shipped to



Edmonton.

COMMISSIONER THOMPSON: Part of your cost would be from Waterways to Edmonton. There must be a freight rate.

MR. HAMILTON: There is a freight rate from Waterways to Edmonton, but the freight rate from Waterways to New York is the same as Edmonton to New York, so Waterways to Edmonton is nothing.

COMMISSIONER GAINER: You mentioned the freight rate to New York would be the same.

MR. HAMILTON: Yes.

COMMISSIONER GAINER: That would mean that the railway would have no increased marginal revenue?

MR. HAMILTON: At present they stand to get nothing, and they would get fifty million feet of lumber going. The cars up to Waterways, even a one-way rate at the present time ---

COMMISSIONER GAINER: Are they not carrying it for nothing?

MR. HAMILTON: No. The freight rate from Waterways to Toronto is very close to \$30 a thousand.

COMMISSIONER GAINER: Would it be the same from Edmonton to Toronto?

MR. HAMILTON: Yes, but this is freight rate they wouldn't get at all.

COMMISSIONER GAINER: Are they not getting



it now?

MR. HAMILTON: No.

COMMISSIONER GAINER: And with the freight rate went in they wouldn't get it?

MR. HAMILTON: Yes, they would get \$30 a thousand to Toronto.

MR. FEEHAN: Are you suggesting that the market in New York would be increased by fifty million Canadian feet of lumber over what it presently is?

MR. HAMILTON: You can sell lumber in New York at a price always.

MR. FEEHAN: Are you saying that you would create a market in New York for Canadian lumber?

MR. HAMILTON: We would sell fifty million feet of lumber in New York, yes.

MR. FEEHAN: And somebody else in the United States wouldn't sell that?

MR. HAMILTON: Somebody else in the United States wouldn't sell, yes.

COMMISSIONER THOMPSON: The railway haul from Waterways to Edmonton is free?

MR. HAMILTON: Yes, but if you stopped the car at Edmonton it wouldn't be. From Prince Rupert it is further than from Peace Point.

MR. THOMPSON: You said you would then expect that they would haul it from Peace Point



to Edmonton free also?

MR. HAMILTON: Yes, in order to get the \$30 a thousand from Edmonton to Toronto.

COMMISSIONER GAINER: But they would have no additional freight if they were shipping by barge and rail?

MR. HAMILTON: Yes, but my position is that they would never ship fifty million feet.

COMMISSIONER GAINER: That is their business; the rate structure is up to them?

MR. HAMILTON: Yes, and it is more mileage from Prince Rupert to Toronto than it is to Peace Point. They want lumber to be all competitive. It doesn't hold on the short haul, it is just on the long haul. I think when they are thinking of a 3,000-mile haul, another 160 miles is not significant when they are getting the \$30 a thousand. But to get that is insignificant. I think that is the general theory.

Now, I was pointing out that there is no highway to this location, and I don't think there ever will be one; certainly we don't see one in the near future. The Grimshaw route has a highway and their lumber operations on that can operate to a certain extent economically because of the highway, and



we have no possibility in this case.

The second point here: The shipping season is at present limited to the four summer months during which barges operate. That is June, July, August and September; you are limited to that.

If a railway were available, year round shipping would be possible and production could be doubled with very little addition to the present productive facilities.

I would estimate our productive facilities are something like ten million feet a year at present. With a railway it would make it twenty million feet, with practically no additions. You must plane lumber as you ship it; you can't plane in September and stockpile it until you are ready to ship it in June. So there is a complete bottleneck there. We could double our production from ten million to twenty million automatically with a shipping season of eight or nine months a year. The usual pattern in this country is to log and saw in the winter and plane in the spring, summer and autumn. It is quite normal for planing mills to start up late April and early May and keep on till nearly Christmas, but here it is from June to September, and it is very restricted.

In addition with rail shipping a more



permanent year round employment would be provided.

At the present time it is a three-ring circus during the four summer months when you are logging a bit, sawing a bit and planing as hard as you can, and in the winter you have quite enough.

The third reason why a railroad would be important is: Operating costs in the north are much higher due to the lack of a railroad: freight rates are high; since transportation is available only during the short summer season, it is necessary to accumulate large inventories of rough lumber and supplies with a consequent increase in interest and insurance costs. In the last barge in September you must take down sufficient supplies to carry you right through until next June, at very substantial inventories which have high insurance and interest costs. In addition to that you have the hazard of carrying supplies during the flooding season in the spring. Last year about \$30,000 worth of supplies were destroyed at that location. Incidentally, it is a type of insurance you can't get.

In addition, an airplane with high operating costs is almost a necessity, being the only means of transportation of men, and being needed to take care of emergencies that



continuously arise in a lumber operation in a remote area not served by rail.

COMMISSIONER THOMPSON: Why do you not log in the winter?

MR. HAMILTON: We do.

COMMISSIONER THOMPSON: Do you saw in the winter as well?

MR. HAMILTON: Yes.

COMMISSIONER THOMPSON: Is that because labour is available?

MR. HAMILTON: Labour is available, but the basic reason is the climatic conditions and the areas are usually inaccessible in the summer. This lends itself to summer operations, but very few Alberta operations do.

COMMISSIONER GAINER: I was just wondering, Mr. Hamilton -- you have mentioned the figure of about \$6.60 a ton water rates?

MR. HAMILTON: Seven dollars a ton water rates, and I estimated it at \$6.60 a thousand.

COMMISSIONER GAINER: What would be the rate from Edmonton to Waterways by rail, do you know?

MR. HAMILTON: Mr. Matty could tell us.

MR. MATTY: Well, l.c.l. rates are, I think, around \$1.50 a hundred, which is the way we



have taken a lot of our supplies, groceries and so on.

COMMISSIONER GAINER: That is Edmonton to Waterways?

MR. HAMILTON: Yes, but the freight rate on lumber south is different.

COMMISSIONER THOMPSON: What did you say the rate was from Edmonton to Waterways?

MR. MATTY: About a dollar and a half per hundred pounds. That is about \$30 a ton.

COMMISSIONER THOMPSON: How much is that down the river?

MR. MATTY: About 65 cents a hundred pounds.



COMMISSIONER GAINER: Would this be the core of your argument, that in this particular case in your operations, where you are shifting beyond it, the advantage of the railway would be to eliminate the water rate -- the amount that you now have? You can get the same railway rate, you assume?

MR. HAMILTON: That is the bulk of the argument. Also, our costs would be better by reason of the fact that the remoteness of the area would be taken away; supplies would be nearer; it would double our capacity, which helps operating costs.

COMMISSIONER GAINER: That same advantage wouldn't accrue to northern shipping unless they were shipping to distant points, when they would get the advantage of the distance rates. In other words, if they were exporting to Edmonton it wouldn't be so attractive as it would be if they were exporting beyond Edmonton?

MR. HAMILTON: That is right.

COMMISSIONER THOMPSON: There is still one statement I cannot reconcile. You say that your freight from here to Waterways is approximately \$30 a ton -- about \$30 a ton on the rail?

MR. HAMILTON: Yes.



COMMISSIONER THOMPSON: And if you put it on the water it is \$13 from there to where you work?

MR. HAMILTON: Yes.

COMMISSIONER THOMPSON: Would it not be cheaper to build a canal from there (indicating) to Waterways instead of a railroad? If you build a railroad it is going to cost a lot more. If it costs you \$30 to get it up to Waterways and then only costs you \$13 to bring it from there to your base of operation wouldn't it cost a lot more?

MR. HAMILTON: I doubt it. In the case of railway rates when you add a distance to a long distance you don't increase proportionately the cost.

That is an l.c.l. rate, is it?

MR. MATTY: I think it is about 55 cents a hundred, Waterways to Edmonton.

MR. HAMILTON: Yes; but on supplies?

MR. MATTY: They are naturally a lot higher than railroad rates. That is the commodity rate.

COMMISSIONER GAINER: The reason we are interested in it is that we have come across it on a number of occasions. When you consider the total cost of shipping supplies in from Edmonton north the bulk of that total cost



accrues to railway revenue rather than barge revenue because of the lower cost per pound in moving by barge.

MR. HAMILTON: Our argument is mainly on the way out as far as freight rates are concerned. Our argument on the way in is mainly on the matter of convenience and the extent of our shipping season and the elimination of a necessity of the large installation of supplies. That is a very serious one.

COMMISSIONER GAINER: It must not affect your costs perceptibly if you went to railway shipping entirely so far as supplies moving in are concerned, but it would extend your . . .

MR. HAMILTON: . . . season.

COMMISSIONER GAINER: . . . your season and the convenience?

MR. HAMILTON: Yes; and eliminate to a large extent the use of aircraft, which is very expensive; and any time you can double your production with very little in the way of any equipment your depreciation costs and all other costs go down proportionately.

THE CHAIRMAN: You propose a lot more than doubling. You go from seven million ---

MR. HAMILTON: I say that we have ten million now. We have only shipped seven million



this season. There are certain reasons for that. We were flooded out very severely in the spring of 1958. But our production will be ten million feet next year, and I was proposing to go from ten to twenty. The other thirty I attributed to Denny as his productive capacity now, plus -- he may have thirty now. But there will be no trouble to get up to fifty. But I was only attributing twenty of that to us.

COMMISSIONER GAINER: There is one other thing I would like to be certain of. I find it a little hard to understand why you would find it so difficult, let us say, to move from ten million to a much higher figure in the absence of a railroad.

MR. HAMILTON: You need planing capacity more than any other capacity. In order to double your planing capacity you would have to add another \$100,000 planer.

COMMISSIONER GAINER: With the present planing mill what would you turn out if you started to plane in May, or you could plane before that -- in April?

MR. HAMILTON: Till June -- about ten million.

COMMISSIONER GAINER: Can you put barges up the river in June?

MR. MATTY: The first of June, or



close to it.

MR. HAMILTON: About ten million feet is a pretty good average. Working with the same planing mill you could put out twenty million in a longer season. Right now we are double-shifting the planer to try to get seven million out. The planer is going day and night at the present time.

COMMISSIONER GAINER: Do you do any logging and sawing in the winter months?

MR. HAMILTON: We do logging and sawing in the winter, but mainly it is a summer operation. The soil is sandy.

THE CHAIRMAN: Mr. Feehan?

MR. FEEHAN: Mr. Hamilton, I wonder if you could give me a little bit of the background regarding licences which you now hold in Wood Buffalo National Park?

MR. HAMILTON: We hold two licences with an estimated footage of 460,000,000 feet of spruce.

We obtained the first one in 1945 . . .

MR. FEEHAN: 1945 or 1955?

MR. HAMILTON: I am sorry, 1955. Was it 1955 or 1954, Mr. Matty?

MR. MATTY: Yes, 1955.

MR. HAMILTON: And we commenced operations in the spring of 1956.

MR. FEEHAN: And the second one?



MR. HAMILTON: The second one we obtained two years later.

MR. FOUKS: In 1957, or 1958? Was it two years after 1955, or 1956?

MR. HAMILTON: 1957.

MR. FEEHAN: And these were obtained under an Order in Council after an amendment to the Act governing national parks?

MR. HAMILTON: I think that is probably right.

MR. FEEHAN: Now, you have mentioned the fact that the timber you are cutting is either mature or over-mature, and I presume that it came at the request of the government that you cut this over-mature lumber?

MR. HAMILTON: They advertised it for sale.

MR. FEEHAN: And you . . .

MR. HAMILTON: We were the successful bidders in one of them. Another man was the successful bidder on the second one and we received an assignment of it from him.

MR. FEEHAN: Had you had a season to cruise this lumber prior to getting .

MR. HAMILTON: No, I saw it after.

MR. FEEHAN: You sent in crews?

MR. HAMILTON: We did what we could to find out what the timber was like, which



wasn't too much, because their time was limited and, then, we were the successful bidder.

MR. FEEHAN: Do you have operations in other portions of Alberta?

MR. HAMILTON: Yes.

MR. FEEHAN: Could you give us a rough outline of where they are?

MR. HAMILTON: We have a planing mill at Chisholm which is on the N.A.R. north of Edmonton and a little west. It is on this railroad (indicating). The railroad bends to go round the Lesser Slave River . . .

MR. FEEHAN: That is Smith, not Fort Smith?

MR. HAMILTON: Yes; and we have a planing mill at Slave Lake, which is on the same railroad. We have a planing mill at Aggie, which is further alone; and we have a planing mill at Waterways, at White Court in Alberta, and we have a planing mill at Keg River on the Grimshaw highway.

MR. FEEHAN: And are you operating pretty well at full capacity now?

MR. HAMILTON: Yes; to the extent that the timber will let them.

MR. FEEHAN: So the park area would be the only place you could appreciably increase your output; is that correct?

MR. HAMILTON: I think that is correct, yes.



MR. FEEHAN: Now, in 1955 when you went into this area you, of course, were working on the assumption that all the lumber would have to be barged out?

MR. HAMILTON: We hoped the local market would be a little larger than it was; but from then on we were working on the assumption that it would have to be barged out.

MR. FEEHAN: And you found it to be uneconomic?

MR. HAMILTON: That is correct. In 1955/56 the price for lumber was much higher than it is today.

MR. FEEHAN: Do you anticipate that if a railway is not constructed in the Waterways area it will continue to be uneconomical?

MR. HAMILTON: I would think so, yes. Yes, I would say definitely that to make this operation successful under present conditions is extremely difficult.

MR. FEEHAN: Could I put you on the spot and ask you this question? In the event that the railway is not constructed would you then, in all probability, shut down your Buffalo Park mill?



MR. HAMILTON: I think we would try it for another couple of years and if there was no better success with it in the next three years than we have had in the past, we would definitely shut it down.

MR. FEEHAN: I don't suppose you would like to speak for Denny Logging Company?

MR. HAMILTON: No, I wouldn't like to speak for him. In any case we would never build a capacity -- we would never produce more than 10 million feet. That is quite definite. We would never go to another location in that area.

MR. FEEHAN: You certainly would not apply for any particular timber limits within the Park?

MR. HAMILTON: No, I would think the only reason that might make it worth going on is that there is a lot of money in there already, that has gone into it and you would not have to worry about depreciation, just additional cost. That would be important. That would be the only thing that might give you a chance.

MR. FEEHAN: And the mature timber that you speak of was manufactured by --

MR. HAMILTON: Yes.

MR. FEEHAN: When you speak of mature timber, can it not be said that any forest in Alberta does have some type of mature timber?

MR. HAMILTON: I wouldn't say that. I can



only give you what the foresters told me, of course. I think the main over mature stands are situated in Grand Prairie. That is one of the main over mature stands. Other areas, for instance, the Slave Lake area is considered immature to mature. Certainly not overmature and not too much of it is matured. I believe north of Grimshaw is considered an immature site.

COMMISSIONER GAINER: Do you mind if I interrupt you, Mr. Feehan, while we are on the subject. I am interested in this: Did you say you did not put cruisers into your timber?

MR. HAMILTON: That is correct.

COMMISSIONER GAINER: How do you determine whether it is mature or over mature? How is the determination made?

MR. HAMILTON: Most of stands are mature and over mature.

COMMISSIONER GAINER: The whole stands are -

MR. HAMILTON: Yes. Certainly.

COMMISSIONER GAINER: What judgment do you use in coming to an appraisal of the value of the timber that might be not quite immature or over-mature timber?

MR. HAMILTON: To a certain extent you have the Government crews. You know the acreage and you can compute the footage per acre and from that com-



putation it was obvious this was a heavy stand of timber.

COMMISSIONER GAINER: There has been an inventory taken of the Park.

MR. HAMILTON: Yes, at Ottawa.

COMMISSIONER GAINER: Ottawa?

MR. HAMILTON: Yes.

COMMISSIONER GAINER: I see.

MR. HAMILTON: It was obvious that this was a very heavy stand of timber.

COMMISSIONER GAINER: Would you know what type or the proportions of the different types you would have; would you have some rough idea?

MR. HAMILTON: Yes. We knew it was mostly on the mature side and that it was practically all spruce. It has proven to be more defective than we expected. It has more overmature than we expected.

COMMISSIONER GAINER: In practical terms, what is the effect of it being too overmature? At what point do you discard it?

MR. HAMILTON: There is bad windshot in it. Perhaps 15 per cent of what we cut is more or less worthless. 10 per cent is worthless and 5 per cent is marginal.

COMMISSIONER. GAINER: Do you saw it?

MR. HAMILTON: Yes.

COMMISSIONER GAINER: Do you plane it?



MR. HAMILTON: You saw it. You don't need to plane it if it is bad.

COMMISSIONER GAINER: It becomes obvious when you saw it?

MR. HAMILTON: Yes. A lot of the defects show up after drying rather than before drying and it jacks, splits.

COMMISSIONER GAINER: Thank you.

MR. FEEHAN: Would the licences under which you operate contain terms as to the minimum annual production?

MR. HAMILTON: The Government have deleted the minimum now realising the difficulties.

MR. FEEHAN: Could you tell us what those minimums were originally?

MR. HAMILTON: The minimum -- I am just guessing but I think I am fairly close, the minimum now as to sales were ten million feet per year.

MR. MATTY: I think that is very close. The first was four million. I am not quite sure of the second.

MR. HAMILTON: Ten million.

MR. FEEHAN: I thought you said you were to remove a total of ten million board feet per annum.

MR. HAMILTON: At the minimum.



MR. FEEHAN: Have you ever come up to that minimum production?

MR. HAMILTON: They give you a certain year to attain a minimum, to build up to it. We have all told this year complied with all the original requirements up till this year. Now they have changed and seven million is all right, but our highest production was 8,600,000 feet in 1957.

MR. MATTY: That is right.

MR. FEEHAN: That would be the highest, I suppose. It would be then a lesser amount in the other years.

MR. HAMILTON: Yes, 1956, which was the first year, it was about five and a half million feet. In 1957 it was 8,600,000 feet and in 1958 it was about five and a half million and this time seven million. In 1957 we had a planing mill burned down completely and in 1958 we had slug that held production back.

MR. FEEHAN: You have had some misfortunes in there.

MR. HAMILTON: Yes.

MR. FEEHAN: You say that the minimum requirements have been weighted.

MR. HAMILTON: Yes.

MR. FEEHAN: Can you tell me what the



minimum requirements are now?

MR. HAMILTON: One million feet.

MR. FEEHAN: One million board feet
per annum.

MR. HAMILTON: Yes.

MR. FEEHAN: Would that be all spruce?

MR. HAMILTON: That would be spruce.

MR. FEEHAN: And is there a minimum
requirement for poplar?

MR. HAMILTON: No. We haven't any
poplar on our place.

MR. FEEHAN: I notice a reference on
page one of your brief, Mr. Hamilton, to a plywood
manufacturing plant.

MR. HAMILTON: Yes.

MR. FEEHAN: Was that contemplated in
the original licence?

MR. HAMILTON: In the original sale on
which Denny Brothers was the successful bidder there
was a requirement that a plywood costing \$1,500,000
be built. That was a requirement of the sale
before you could tender on the sale.

MR. FEEHAN: Is this some licence that
you obtained from Denny?

MR. HAMILTON: No. Denny still is up
in that country at Fort Fitzgerald.

MR. FEEHAN: Does the plywood manufacturing
pertain to you in any way then?



MR. HAMILTON: No.

MR. FEEHAN: It belongs to Denny?

MR. HAMILTON: It is Mr. Denny's.

MR. FEEHAN: It is an obligation of
Mr. Denny?

MR. HAMILTON: Yes.

MR. FEEHAN: Are there any other ob-
ligations that you have regarding increasing the
size of your mill?

MR. HAMILTON: No. Our obligation
is completed at the present time. The sales
carried obligations to build mills. We have
complied with these obligations.

MR. FEEHAN: I was also interested in
your estimate that some fifty million board feet
of lumber could reach the Toronto and New York
market if the railway were to be built along the
Waterways route.

MR. HAMILTON: Yes

MR. FEEHAN: Well, I asked you this
before and I would like to ask it again just to
clarify.

MR. HAMILTON: Yes.

MR. FEEHAN: The New York and Toronto
market, I suppose, is fairly steady?

MR. HAMILTON: Yes.

MR. FEEHAN: You feel that if the
railway were to go through Waterways you would ---



MR. HAMILTON: Ourselves and Denny, yes, could sell fifty million in those markets.

MR. FEEHAN: How would that affect other lumber industries in Canada?

MR. HAMILTON: I don't think it would affect them at all.

MR. MATTY: I might say in that respect the annual continent-wide production of lumber is around the order of thirty billion feet and this fifty million that some think would be hard to sell is only one sixth hundredth of the amount sold over on the continent.

MR. FEEHAN: I was just coming to that. Would there be a market for this additional fifty million feet?

MR. HAMILTON: Yes, quite definitely.

MR. FEEHAN: And probably a market for much more than that if you could produce it.

MR. HAMILTON: Yes.

THE CHAIRMAN: Mr. Hamilton, we are following the practice of not having cross-examination except by commission counsel so I hope you don't mind other counsel, who are interested in these proceedings, discuss with Mr. Feehan some further questions.

COMMISSIONER THOMPSON: May I ask you another question. Did you say that the lumber would



last another fifty years?

MR. HAMILTON: I don't think it would.
Perhaps Mr. Matty could answer that.

MR. MATTY: It is already over-mature.
It is between a hundred and fifty and two hundred
years old now.

COMMISSIONER THOMPSON: How long does it
take a tree to grow to be mature?

MR. HAMILTON: I would say around a
hundred and twenty years.

COMMISSIONER THOMPSON: This stuff is
probably at that age now.

MR. HAMILTON: Yes. The bulk of it
seems beyond that.

MR. MATTY: It is quite a bit beyond that
age now.

COMMISSIONER THOMPSON: At your present
rate of logging, could you log that off in fifty
years?

MR. HAMILTON: We could develop our sales
in thirty years, yes.

COMMISSIONER THOMPSON: In other words that
would not be mature lumber going to waste.

MR. HAMILTON: No, I think we would get it
out.

COMMISSIONER THOMPSON: It takes 120 years
for a tree to grow.



MR. HAMILTON: Yes. I think the Board at Ottawa rates it at a little longer than 120 years to mature in this country.

COMMISSIONER GAINER: While we are on that subject, we were talking earlier about over-mature logs and the effect this had on the lumber. Is this true of peeler logs as well, if you are using over-mature timber for plywood?

MR. HAMILTON: Yes.

COMMISSIONER GAINER: What kind of effect does that have?

MR. HAMILTON: Of course, we are just in the saw log business.

MR. MATTY: The effect of being over aged is some of the lumber has got rot in it. Some of it has got splits. While logging will be a definite detriment in making plywood --

COMMISSIONER GAINER: This would be the heart.

MR. MATTY: Yes, but the splits wouldn't be any great objection.

COMMISSIONER GAINER: Would this mean you would get less veneer than in another log because you could not use the heart, is that it, when you are peeling?

MR. HAMILTON: That is right. The rot is useless as in any product, only to burn.



COMMISSIONER GAINER: This would not affect the outside of the log, is that it?

MR. MATTY: Sometimes the rotting would be right through the entire cross section of the logs.

MR. HAMILTON: It would make it defective even if it was just the core.

MR. MATTY: When you get close to the middle diameter it would break up.

COMMISSIONER GAINER: You suggest about 15 per cent of what you cut was classified as useless. Do you have some salvage value? Do you sell it?

MR. HAMILTON: On 10 per cent we have no salvage market to speak of.

COMMISSIONER GAINER: 10 per cent is useless?

MR. HAMILTON: That is one of the things that makes the economics of this very marginal.

COMMISSIONER THOMPSON: You say that the Ottawa people prove it. Do you think they over estimate the amount of timber or is that the usual thing when you are cruising, to over estimate it.

MR. HAMILTON: No. I didn't say that I thought they over estimated it. We found the



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lumber not as good as we expected.

COMMISSIONER THOMPSON: The number
of actual board feet or whatever you call it --

MR. HAMILTON: It is very very difficult
to tell. Cruising is a difficult job even for
an expert.

COMMISSIONER THOMPSON: I don't know much
about lumber but it always seems to me the amount
of lumber that someone gets is never as big as the
cruiser estimate. I suppose that is entirely
natural. They cannot see if the log is rotten
inside.



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It varies, some cruisers are conservative and some are optomistic.

THE CHAIRMAN: Mr. Hamilton, your normal production would be 10,000,000 feet a year.

MR. HAMILTON: From that operation.

THE CHAIRMAN: Seven only because of the --?

MR. HAMILTON: Well, last year we were held back and the lumber market was very weak and we were not anxious to push production.

THE CHAIRMAN: What is the Denny Company's normal production, do you know?

MR. HAMILTON: Well, we can only guess. I do not know whether he is putting in a brief or not.

THE CHAIRMAN: He is.

MR. HAMILTON: I would just be guessing and I think it would be wise for him to estimate his own.

THE CHAIRMAN: But you are able to estimate the total production that would come from there?

MR. HAMILTON: I estimated fifty and I am quite sure I am conservative in estimating fifty million in total.

THE CHAIRMAN: Of which twenty million would be yours?



MR. HAMILTON: Yes.

THE CHAIRMAN: You are allowing quite a lot for the Denny people, thirty million.

MR. HAMILTON: If there was a railway there we could put in ten million on the Birch River -- that is completely inaccessible.

THE CHAIRMAN: Your production would increase twenty million a year if there were a railway?

MR. HAMILTON: We could quite readily but the day after tomorrow we could be at twenty million but there would be no trick to putting another ten million on the Birch River.

THE CHAIRMAN: Your production, if the railroad were built within the next few years, your production would be increased by twenty million feet?

MR. HAMILTON: Yes, we would get to the twenty million the year the railroad went in and another year later we would be up another ten million.

THE CHAIRMAN: You estimated then, something further for the Denny Company?

MR. HAMILTON: Yes.

THE CHAIRMAN: How much do you expect he could increase?

MR. HAMILTON: I was giving him twenty million, but he might think he could do better



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THE CHAIRMAN: Twenty million increase
if the railroad were to go in?

MR. HAMILTON: Well, over what he has
at the present time.

THE CHAIRMAN: Twenty million more?

MR. HAMILTON: We haven't anything so
far.

THE CHAIRMAN: So you are giving him
twenty?

MR. HAMILTON: Yes.

THE CHAIRMAN: That is, you estimate
an increase of forty million feet a year if the
railroad is built?

MR. HAMILTON: Yes.

THE CHAIRMAN: Yesterday in Peace
River it was estimated for us, that if the rail-
road were to be built near Grimshaw instead of on
this route there would be an increase of thirty
million feet for you. What would you say to that?

MR. HAMILTON: I think that is probably
reasonable.

THE CHAIRMAN: So, between the two
routes it would look as though there would be an
increase of thirty million feet per year along the
west route if the railroad were built and an in-
crease of forty million feet on the east route if
the railroad were built there.



MR. HAMILTON: I would not like to speak definitely for this group. I am just saying the thirty million appears reasonable to me. I am quite confident that on my figures on the east route I could say fifty million a year there quite readily.

COMMISSIONER THOMPSON: Do you know anything about the west route?

MR. HAMILTON: Yes, I know something about it but I would not like to be put in the position of saying that I could only produce thirty million and on this hand produce forty million.

COMMISSIONER THOMPSON: Well, the Government maps could tell us.

MR. HAMILTON: Well, there are a lot of imponderables in this thing. The production could be increased right now under the present situation.

COMMISSIONER THOMPSON: If they had a railway?

MR. HAMILTON: No, without the railroad I think production could be increased right now.

COMMISSIONER THOMPSON: Do you truck now out of Keg River?

MR. HAMILTON: We truck 105 miles to Grimshaw and put it on cars for New York from Grimshaw.

COMMISSIONER THOMPSON: And what is your



cost from Grimshaw to New York?

MR. HAMILTON: The same as Waterways to New York, they are all the same rate once you hit the railway.

THE CHAIRMAN: What is the cost of trucking from Keg River to Grimshaw?

MR. HAMILTON: Perhaps \$5.75 and 75 cents for loading.

MR. MATTY: About that, \$6.50.

MR. HAMILTON: \$6.50 in total to truck and load.

THE CHAIRMAN: About \$2.50 more expensive for you to produce your lumber.

MR. HAMILTON: No, it is materially more expensive because supplies, the problems of operating in isolation are just terrible.

THE CHAIRMAN: It is just transportation this \$2.50 a ton?

MR. HAMILTON: Yes.

THE CHAIRMAN: And the other costs are --

MR. HAMILTON: Yes, the other costs are very, very much higher.

MR. FEEHAN: Mr. Hamilton, are you suggesting that from rail end it would cost more money to get in supplies to your operation than it would to the operation if it were to start north of Grimshaw? Do you follow my question?

MR. HAMILTON: No, I do not think I do.



MR. FEEHAN: Let us say that no rail-road was built at all.

MR. HAMILTON: Yes.

MR. FEEHAN: Would it be more expensive to bring in supplies to your operation or would it be more expensive to truck supplies for the North Western operation?

MR. HAMILTON: It would be more expensive for our operation in the east in every way, not only supplies but the fact that you need an aeroplane and your men have to go up by air. The cost of operating an aeroplane -- this year for the operation of seven million feet the cost of the aeroplane is on the order of \$20,000 -- that is, for an aeroplane, service and operation.

MR. FEEHAN: I have been asked to ask you a few more questions particularly with regard to your moving into that area without cruising it. I find it hard to understand why you would do that.

MR. HAMILTON: Aerial photographs are available of the whole area.

MR. FEEHAN: Did you take aerial photographs?

MR. HAMILTON: We did not take them, but we bought them of the whole area and we had a forester make an analysis of the timber in the area from photographs.



MR. FEEHAN: From whom would you purchase those?

MR. HAMILTON: The Dominion Government have a service that supplies those.

MR. FEEHAN: That would be the Department of Mines and Technical Services?

MR. HAMILTON: Yes.

THE CHAIRMAN: Provincial Government have them too, do they not?

MR. HAMILTON: Yes, but not in this area being a national park.

MR. FEEHAN: You say you lost money in 1956?

MR. HAMILTON: We made a little in 1956 and lost money ever since. In 1956 the northern market was a little better. We were the only one in the area for one thing.

MR. FEEHAN: You were sufficiently satisfied that you made application for a further licence in 1957?

MR. HAMILTON: We did not but somebody else did and we arranged to have it assigned to us.

MR. FEEHAN: You expended monies to acquire further licence in 1957?

MR. HAMILTON: I think it was late 1956, yes.

MR. FEEHAN: Can you tell me who it was that obtained that licence in 1957?



MR. HAMILTON: Mr. K.O. Watkins of Corvallis, Oregon. He was the man who put up the first timber sale and we bid it away from him.

MR. FEEHAN: Is he still operating in that area?

MR. HAMILTON: He never did operate. You must remember in 1956 the lumber market was probably \$15 higher than it is today which is a consideration.

MR. FEEHAN: We have received information that the total lumber available in that area is one billion eight hundred board feet, would that be correct?

MR. HAMILTON: In that immediate area that is the present estimate, yes.

MR. FEEHAN: And you have told us that you have licences on a total of one billion five hundred million feet of lumber.

MR. HAMILTON: That is the total licence issued, we have four hundred and sixty million ourselves, and Denny has one billion and fifty million. Denny has more timber than we have.

MR. FEEHAN: Then, out of one billion eight hundred million licences licences, have been granted on one billion five hundred million?

MR. HAMILTON: Yes.



MR. FEEHAN: Now, would all this be mature or over mature lumber?

MR. HAMILTON: All that has been sold is mature and over mature, yes.

MR. FEEHAN: The thing I am trying to get at is, is the total of all the lumber in that area.

MR. HAMILTON: There is some mature in that area that was not be normally sold at this time.

MR. FEEHAN: You have not got my question, I do not think. This gross of one billion eight hundred million --?

MR. HAMILTON: That is matured.

MR. FEEHAN: That is mature and over mature.

MR. HAMILTON: Yes.



MR. FEEHAN: I see. We have received information at previous sittings of this Commission that that figure of 1,800,000,000 was the total of all commercial lumber in the park. Would that be right?

MR. HAMILTON: I think that is perhaps right. We would not consider immature commercial.

MR. FEEHAN: How much of this immature lumber will be mature by the time your leases have terminated?

MR. HAMILTON: I would not like to estimate that. Have you any estimate, Tom?

MR. MATTY: Never thought of it, really.

MR. FEEHAN: Has there been any alteration in recent times of the stumpage rate you are paying the Federal Government?

MR. HAMILTON: Yes.

MR. FEEHAN: What was the previous stumpage rate?

MR. HAMILTON: Depended on the bid price. It varied from \$7.20 a thousand to \$6.55 a thousand. The present rate, which has been granted for five years, is \$3.75.

MR. FEEHAN: So that the stumpage rates have been cut in half, approximately?

MR. HAMILTON: Not quite but \$6.55 to \$3.75 in the one case.

MR. FEEHAN: What stumpage rate would



you be paying on your other lumbering business in the province?

MR. HAMILTON: The Alberta rate, the going rate, is \$5.75. That is the standard rate. You still must acquire timber by competitive sale and you sometimes have to bid more than that. I would think that the average might be \$2 above the \$5.75, might be close to that.

MR. FEEHAN: So lumbering in a national park is worth \$2 less in stumpage than it is on provincial lands?

MR. HAMILTON: That is correct. That is because of inaccessibility. That is the reason the five-year term is put in there so it will be adjusted back if a railroad goes in. That is the explicit purpose of the five-year term of the reduced rate.

MR. FOUKS: I did not hear the last remark.

MR. HAMILTON: \$3.75 is a five-year rate and is to be adjusted at the end of five years. It was put that way in case the railroad went past it.

MR. BALDWIN: It was put that way ---

MR. FEEHAN: Has there been a promise of a railway to be built?

MR. HAMILTON: No.

MR. FEEHAN: There must have been some



talk about it if this matter came up.

MR. HAMILTON: This adjustment only happened in February of this year. Of course the railway has been talked about quite seriously for the last two years.

MR. FEEHAN: Do you think the reduction was directly attributable to the failure of the railway to be constructed?

MR. HAMILTON: No, I would not say that. I will put it this way: if the railroad had been constructed there would have been no adjustment of timber dues. I am quite sure of that. The release in stumpage was granted mainly because of recognition the timber was not as good as everybody expected it to be. It is quite defective.

MR. SHEEHAN: You are speaking now of the quality of the timber in the area. Would you compare it with the quality in other areas of Alberta?

MR. HAMILTON: It is more defective than the average of Alberta by quite a bit. Would you say that is correct, Tom?

MR. MATTY: Yes. I think it is hard to measure exactly but it is between five and ten per cent more defective than timber in other areas of Alberta where we operate.

MR. FEEHAN: Would you be obtaining a lesser sum for it per thousand?



MR. HAMILTON: You cannot sell it as high grade lumber. You can only sell it as standard dimension lumber and ten per cent of it that is not saleable at all so you could either take that into the average selling price or in the cost, either way.

MR. FEEHAN: In order to produce an additional 50 million, or an additional 40 million feet per annum it would be necessary for you to apply for further licences in the area; would it not?

MR. HAMILTON: No, I think 460 million -- that would give you 23 million feet a year or 20 million feet, say, for twenty years.

MR. FEEHAN: You have been given a carte blanche on a full scale lumbering industry within the national park?

MR. HAMILTON: Yes. The government would like to see this timber cut.

MR. FEEHAN: You say they would like to see the timber cut. Are they particularly anxious to have you stay there?

MR. HAMILTON: They are anxious. The employment of native labour is a very serious consideration as far as they are concerned.

MR. FEEHAN: It is quite obvious that they are anxious enough to have you stay there to give you a subsidy by reason of the



reduction of the stumpage charges. Would you say that is true?

MR. HAMILTON: I don't like to say "subsidy" when we are paying \$3.75 and still losing money.

MR. BALDWIN: No deficiency payments!

MR. FEEHAN: Have you had any assistance from the Industrial Development Bank?

MR. HAMILTON: No, it is all our own money that is going.

MR. FEEHAN: There is one further thing. There is a road under the Roads to Resources programme going in between Fort Vermilion and -- Peace Point and Fort Smith?

MR. HAMILTON: Yes.

MR. FEEHAN: Would that not give you some accommodation for road travel?

MR. HAMILTON: No significance whatever to us.

MR. FEEHAN: None to your lumbering industry at all?

MR. HAMILTON: No, there is nothing at the end of it. You see, it is farther from our camp to the railroad this way on the western route than it is from our camp to Waterways.

THE CHAIRMAN: But is all year round transportation?

MR. HAMILTON: From Grimshaw to



our camp?

THE CHAIRMAN: Yes.

MR. HAMILTON: That is a lot of miles.

We are hauling planed lumber from here.

COMMISSIONER THOMPSON: You cannot bring your supplies on this highway?

MR. HAMILTON: No.

COMMISSIONER THOMPSON: You could get the men on buses cheaper?

MR. HAMILTON: No, I don't think so. That is a tremendous distance; that is 400 miles.

COMMISSIONER THOMPSON: Tell me something, why would you lumber, say, at Keg River rather than over there?

MR. HAMILTON: It is not as mature.

COMMISSIONER THOMPSON: Just a matter of age?

MR. HAMILTON: Yes.

COMMISSIONER THOMPSON: I got the idea that the lumber in the rest of Alberta was better than that.

MR. HAMILTON: No, it is due to age. It is spruce lumber and should be as good.

COMMISSIONER GAINER: I have one thing to ask on that. Have you made any commitment to hire native labour in your operation?

MR. HAMILTON: No, we have not.

COMMISSIONER GAINER: Has it worked



out that you have been able to do that?

MR. HAMILTON: What percentage would you estimate, Mr. Matty?

MR. MATTY: About two-thirds of the crew would be native labour.

COMMISSIONER GAINER: During the summer in mill planing and in the bush?

MR. MATTY: That is right, working all places.

COMMISSIONER GAINER: About two-thirds?

MR. MATTY: About two-thirds.

MR. FEEHAN: I would like to have two or three minutes if possible to discuss further questioning with Mr. Fouks.

THE CHAIRMAN: All right. We will adjourn for five minutes.

---(Short recess)



MR. FEEHAN: Mr. Hamilton, I have been asked by Mr. Fouks to ask you some further questions with regard to the evidence that you have given to date. You mentioned the fact that the adjustment in stumpage rates was given to you because of the quality of the lumber being produced in the park area.

MR. HAMILTON: Yes.

MR. FEEHAN: And you told us another time that the reduction in the stumpage might be varied upward after five years?

MR. HAMILTON: Yes.

MR. FEEHAN: Or after the railway came in. It seems to me ---

MR. HAMILTON: Perhaps I over-simplified the matter when I said it was given because of the quality of the timber. That was one of the reasons. The other reasons were a recognition by the government that the operation was definitely a losing venture and it would cease completely if some relief were not given.

MR. FEEHAN: That was going to be my next question. You made certain representations to the Government in February, 1959, and I presume earlier?

MR. HAMILTON: Yes.

MR. FEEHAN: Did you actually threaten you would be required to move out of the area



unless certain concessions were made?

MR. HAMILTON: We didn't threaten them; we just told that the operation was a losing venture.

MR. FEEHAN: Of course, the intimation was there that unless something was done you could not continue?

MR. HAMILTON: Couldn't continue indefinitely.

MR. FEEHAN: Why would it be only in 1959 that the concessions were made, when the quality of the lumber and the losing proposition was there for the past four years?

THE CHAIRMAN: That hasn't been Mr. Hamilton's evidence. He said he made money in 1956.

MR. FEEHAN: Three years, sir.

MR. HAMILTON: I think it is just a reluctance on the part of this company to ask for relief. We contracted to pay a certain stumpage and we thought it was up to us to pay it, until such time we thought it was impossible to operate. We didn't ask for relief.



MR. FEEHAN: In addition to the mill site has there been any other development in the immediate vicinity of your logging and lumbering operations?

MR. HAMILTON: Not other than the homes of the men.

MR. FEEHAN: The lumber camp is there, but nothing more?

MR. HAMILTON: The lumber camp has to be self-sufficient. We have to supply our own cookhouse and we have to supply our own grocery store. We are putting in our own school this year. We have to be self sufficient, which is another item which makes for high costs.

MR. FEEHAN: But there is only the one industry itself?

MR. HAMILTON: Yes.

MR. FEEHAN: Do you have any problems in the area regarding accessibility to the timber?

MR. HAMILTON: Only one, I would say -- the fact that a fair portion of the timber is on the north side of the river and our camp is on the south side of the river, which means that for all of the summer months the north side is completely inaccessible.

MR. FEEHAN: I was wondering, too: You say that in 1957 your mill was burned?



MR. HAMILTON: The planing mill burned down in 1957 -- in March.

MR. FEEHAN: I noticed that in 1959 you produced somewhere in the vicinity of two and a half million feet less than you did in the year the mill was burned.

MR. HAMILTON: The planing mill burned down -- we operated all winter in the winter of 1956/57; we sawed lumber all winter and we had a large stock pile of lumber on hand at the time the planing mill burned down and we rebuilt the planing mill very quickly.

MR. FEEHAN: Perhaps I should word my question in another way. I was wondering why it is that in the year 1959 you estimate your total output as five and a half million, which is something less than your total output for each of the previous...

MR. MATTY: Seven million in 1959.

MR. HAMILTON: Yes.

MR. FEEHAN: Yes; seven million, I should say, rather than five and a half.

MR. HAMILTON: We didn't operate the saw-mill all winter, in the winter of 1958/59, because we didn't think we could do this profitably..

MR. FEEHAN: Is there a possibility...

MR. HAMILTON: I would like to carry on there. It was only in the spring of 1959 that we



got relief from the Dominion Government on our stumpage and Northern Transportation reduced the freight rates slightly, and the two of them made it look like the operation might be in the break-even position when we started operations quite seriously in the spring of 1959.

MR. FEEHAN: You find you are certainly not breaking even in 1959?

MR. HAMILTON: 1959 is going to lose quite a bit of money. I wouldn't like to estimate it offhand, but it is definitely a big loss in 1959.

MR. FEEHAN: Then, what stumpage could you afford to pay in order to reach the break-even point?

MR. HAMILTON: It is a little more difficult question to answer than you might think. It is related to the price of lumber. At the price of lumber today I don't think we could afford to pay any stumpage. On the same operating conditions and with no railroad I don't think we can afford to pay anything.

MR. FEEHAN: You would find it a profitable operation, then, without the payment of any stumpage?

MR. HAMILTON: At the present price of lumber it is touch and go.



MR. FEEHAN: The reason I am asking you these questions is because of the fact that a railway along the west route is a very expensive proposition -- somewhere in the vicinity of seventy five million dollars. That is the reason I am asking you these questions.

MR. HAMILTON: Yes.

MR. FEEHAN: On the basis of seven million board feet how much would your total stumpage payments be?

MR. HAMILTON: About \$26,000. Seven thousand times the three and three quarters.

MR. MATTY: Approximately \$25,000.

MR. HAMILTON: Around there --\$26,250.

MR. FEEHAN: That would be on this year's basis the annual payment which you are making in stumpage?

MR. HAMILTON: Yes. This here is somewhat higher because the timber cut prior to February was charged at the old rate. This year it will be about \$32,000.

MR. FEEHAN: Could you estimate your total investment in the area at the present time?

MR. HAMILTON: I would estimate \$750,000.

MR. FEEHAN: Do you know whether or not the Denny Logging Company has received the same concessions as you have received?



Hamilton

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MR. HAMILTON: To the best of my knowledge, they have.

MR. FEEHAN: It is a question of mathematics, but in the event that you were to produce 50 million feet per annum what would be the total stumpage payment that your company would make?

MR. HAMILTON: \$187,500.

MR. FEEHAN: I gathered you would save \$9 per one hundred board feet shipped out if the railway went in?

MR. HAMILTON: I don't think it would be quite as high as that, but it would be of that order. I am assuming not much of a differential by the railroad.



MR. FEEHAN: I am sorry, a truck was going by and I couldn't hear you.

MR. HAMILTON: I am assuming that the railroad will not have a high construction differential. It is a possibility that there would be a differential in rate. I am assuming there wouldn't be much.

MR. FEEHAN: The construction differential might go on for a few years and then cut off?

MR. HAMILTON: Yes.

MR. FEEHAN: And I think we can take judicial notice of the mathematics?

MR. HAMILTON: Even with a railroad there may be \$2 involved in hauling from our site to Peace Point, but from the nine you should deduct that.

THE CHAIRMAN: Saving around \$7?

MR. HAMILTON: Yes.

THE CHAIRMAN: Provided you get the same rate?

MR. HAMILTON: Yes. We would expect our operating costs to be very substantially less in addition. That is a feature we must not overlook. I do not think we need to worry too much about an aeroplane. We can double the shipping with no additional machinery because we would have a longer shipping season, we



wouldn't have to carry so much inventories and supplies, we would have lower interest charges, and I think our freight would be less, but that is not as important.

MR. FEEHAN: In the event that the railway went to Peace Point, your shipping would be approximately \$350,000 per annum?

MR. HAMILTON: Yes. You said our shipping. We are not taking credit for the 50 million.

MR. FEEHAN: No, between you and the Denny Logging Company?

MR. HAMILTON: Yes. I don't know what Mr. Denny's plans would be -- whether you go close to Fitzgerald or not.

MR. FEEHAN: That is all, sir.

THE CHAIRMAN: I am going to ask a few questions about sustained yield. I understand there are many areas where timber is taken, an attempt is made to replace the timber that is cut off in the hope that lumbering can go on indefinitely there. Now, am I right in this, that in regard to this lumber and timber that you have there is no provision for replacing the trees as you cut them?

MR. HAMILTON: That is correct. Any reforestation will be natural.

THE CHAIRMAN: Is that anticipated, that



it will be natural?

MR. HAMILTON: Yes, I think it is anticipated that other growth will come. But that is a long-term proposition, because in the areas we are in there is very little immature timber. In other areas where there is immature timber, where you cut them out the others are about 35 years old.

THE CHAIRMAN: Yours are all mature?

MR. HAMILTON: Very close to it, although there are stands of immature which are not under licence.

THE CHAIRMAN: Now, you anticipate something between twenty and twenty-five years' time that your lumber would last you, your timber would last you if the railroad went in?

MR. HAMILTON: Yes.

THE CHAIRMAN: What would happen at the end of that period, twenty to twenty-five years, in regard to the lumber industry in that area?

MR. HAMILTON: I wouldn't like to say offhand. I think there may be some immature stands that would be close to maturity at that time, but, as far as we are concerned, we have not looked beyond the twenty-five years.

THE CHAIRMAN: Do you know of any mature stands?

MR. HAMILTON: Yes. I know the parts



cut out as being mature. Would you like to estimate, Tom?

MR. MATTY: Only partially. The area as a whole is mature to over-mature, so you can sustain the same volume of production in that particular area indefinitely.

THE CHAIRMAN: Could you estimate it by what would be reduced?

MR. MATTY: I think after thirty years you might, out of the same area, still be able to get fifteen, twenty million feet a year. That is only in the Peace River Valley and the Birch River.

THE CHAIRMAN: After thirty years the production would be down to ---

MR. MATTY: Fifteen million a year.

THE CHAIRMAN: You say that is only in the Peace River Valley?

MR. MATTY: Yes, the area in Wood Buffalo Park we are talking about. There are other points where there is timber which will be mature over the years, both south and north of our location.

THE CHAIRMAN: Very much?

MR. MATTY: We haven't got information on it.

MR. HAMILTON: We have just flown over it; you can see smaller timber.

COMMISSIONER GAINER: Would the aerial



photograph not provide this kind of information on about the same basis as initially?

MR. HAMILTON: Yes.

COMMISSIONER GAINER: What we are interested in in estimating for one thing is the general proposition of the mature and over-mature timber in the park to the total ---

MR. HAMILTON: Our impression is that there is more over-mature than there is immature for the whole of the Wood Buffalo Park.

COMMISSIONER GAINER: More mature than there is immature?

MR. HAMILTON: Yes.

THE CHAIRMAN: Thank you, Mr. Hamilton.

We will adjourn now until ten o'clock tomorrow morning.

---Adjournment.

ROYAL COMMISSION
ON
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT
EDMONTON, ALBERTA

VOLUME No.: 4

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ROYAL COMMISSION ON
THE GREAT SLAVE LAKE RAILWAY

Hearings of the Royal Commission on
The Great Slave Lake Railway held
at Edmonton, Alberta, at the Court
House, at 10.00 a.m., September 10th,
1959.

PRESENT:

Mr. M.E. MANNING	Chairman
Mr. WALTER D. GAINER	Member
Mr. JOHN ANDERSON-THOMPSON	Member

Mr. FRANCIS M. FEEHAN	Counsel
Mr. A. PATERSON	Secretary



SUBMISSION OF
THE GOVERNMENT OF THE
PROVINCE OF ALBERTA

Appearances:

Honourable Gordon E. Taylor

THE CHAIRMAN: We have the brief this morning of the Government of the Province of Alberta, which is going to be given to us by the Honourable Mr. Taylor, Minister of Highways.

Mr. Taylor, would you like to read it from there, or would you like to come to the witness stand -- whatever you find most convenient.

MR. TAYLOR: From here, sir, if it is convenient.

THE CHAIRMAN: Mr. Taylor, if you would like to elaborate on your brief as you go along, don't hesitate to do it.

MR. TAYLOR: Honourable Mr. Justice M. E. Manning, Chairman, and members of the Royal Commission on the Great Slave Lake Railway: I appreciate the privilege of appearing before you to make representations on behalf of the Government of Alberta on the route of the railway through the northern part of this



province.

The government of this province believes it is important to the future development of northern Alberta and to the Northwest Territories that a railway, so located as to best serve this objective, be constructed at an early date.

Well over four years ago the Alberta Government made representations to the Federal Government urging the construction of a railway from Grimshaw to Pine Point. This was followed by an offer of free right-of-way for the line.

On or about May 1, 1958, when the Federal Government was having difficulty in making a decision on the route, the Honourable E. C. Manning, Premier of Alberta, wrote to the Right Honourable John G. Diefenbaker, Prime Minister of Canada, in part, as follows:

"For a number of years the Alberta Government
"has made strong representations urging the
"construction of a railway from Grimshaw
"north for the purpose of serving the
"interests of Northern Alberta and the North-
"west Territories. As a matter of fact,
"last year we offered to provide free right-
"of-way through Crown lands north of Grim-
"shaw in order to facilitate a decision to
"commence a railway . . ."

Since it appeared that some contribution



would be made towards the cost of the construction of this railway by the Canadian Government on behalf of the people of Canada, the Government of Alberta felt that every effort should be made to ensure that the greatest possible continuing benefits would accrue to the people of Canada.

In this vein, Premier Manning concluded his letter to the Prime Minister as follows:

"We do strongly recommend though that your
"Government and the railways concerned carry
"out exhaustive studies of all economic,
"engineering and other relevant factors
"before you finally accept any route, in
"order that the best interests of the people
"of the Peace River area and the Northwest
"Territories for the present and future may
"be served."

It is in this same spirit that we submit this brief to your Commission today which shows the reasons why we favour the route from Grimshaw north.

Economic Factors of the
Grimshaw Route

If the railways were paying the full cost of the construction on a private enterprise basis, then the economic factors would probably be the determining factors. Even when the railways are being subsidized however the economic factors must be carefully evaluated.

The following points should be noted:



(1) The terms of reference to your Commission as outlined in the newspaper advertisement inviting submissions reads as follows:

"Inquire into and report upon the respective
"merits of the alternative routes which might
"be followed by a railway line to be built
"from Northern Alberta into the southern
"portion of the District of Mackenzie, North-
"west Territories, for the purpose of pro-
"viding access to and contributing to the
"development of that portion of the Terri-
"tories tributary to Great Slave Lake."

It is noted that the purpose of the railway is to provide access to and contribute to the development of the Great Slave Lake area.

A railway from Grimshaw can accomplish this objective. The haul of goods and materials and minerals from that area would be equal to the total hauled via any other route.

(2) The Provincial Department of Lands and Forests has issued the following table:



Net Timber Volume of the Grimshaw Area

Volume Information	Total Volume	1958 Fire Loss	Net Volume
F. B. M. - coniferous	10,488,792,000	87,982,000	10,400,810,000
Cords			
coniferous	45,112,400	801,500	44,310,900
deciduous	78,743,300	221,700	78,521,600
Total	123,855,700	1,023,200	122,832,500

It will be noted that there are now ten billion board feet of coniferous saw timber and 44 million cords of coniferous pulpwood in the Grimshaw area which is defined as the area lying north of Grimshaw and west of the Wood Buffalo Park to the British Columbia boundary.

(3) Close to one-half million acres adjacent to the Grimshaw route are already in farms with over 261,500 acres improved and 14,800 acres in pasture.

The Royal Commission on the Development of Northern Alberta in dealing with the Grimshaw line (on page 94) stated:

"This railroad would traverse the best agri-

"cultural land that remains in the north."

The freight engendered by agriculture is an important factor in determining the economics of a railway line.

(4) The oil and gas and industrial potential in the western area are factors worthy of note.



It is submitted that the diversified economy of the Grimshaw area offer economic considerations.

Engineering Factors

Engineering factors are also of major importance as the lower the capital costs can be kept the sooner the line will be paid for and the more attractive will be the tariffs and the rate of return on the investment. From an engineering point of view there are a number of prime factors which should determine which route is the most applicable.

I General Factors on the Cost of Construction on the Grimshaw Route

Of primary importance is the matter of the cost of construction which involves the length, terrain, type of soil, easy accessibility, river crossings and other geographical features.

(a) With reference to the cost of construction, it is noted that Grimshaw lies almost directly south of Pine Poine and this directness of route would be a factor of prime consideration.

(b) Terrain: The Highways Department through its intensive investigation and construction of the Mackenzie highway has proven data on its files with respect to the type of terrain a railway line would traverse. It has been found that in general, the country is very flat and that very few serious muskeg problems would be



encountered. Drainage conditions, of course, are not as satisfactory as one would find in more rolling country; however, adequate drainage can be achieved at reasonable cost. There are relatively few areas in which excessively heavy excavation quantities would be involved.

Sir, I might add that the drainage throughout the entire area could well be termed as very normal.

(c) Type of Soil: The soil type is generally of a clay nature which, of course, is preferable for embankment construction. The location from Grimshaw to Pine Point would travel through soil of this type for a much greater distance than any other line built from the east, as the rocky Canadian Shield is much further north along this suggested line. The costs of construction are very greatly increased where rock formations are encountered.

(d) Easy Accessibility: The easy accessibility to construction, results in the lowering of transport costs of men and materials to and from the project, and this has an effect on the costs of construction. At present, the Mackenzie highway would make any portion of a proposed railway line from Grimshaw to Pine Point very easily accessible along its entire route. The railway line could, therefore, be constructed



simultaneously along its whole length with the simple expediency of short access roads from the Mackenzie highway to the railway right of way. No other location could be chosen which would enable the builders of a railway line to obtain such easy and cheap access to all points of the line during the construction period.

In that connection I might add that if a line was chosen and where no highway presently exists, it would, I think, essentially be necessary to construct some type of a tote road, and that construction of that road itself would be a heavy financial factor in building through particularly muskeg areas. It would not only have the capacity that a tote road would, it would remain there and be there for maintenance purposes after a road was constructed. In addition to that, if there should be a time when there were tie-ups on the railway line because of slides or strikes or any other factors, trucks could then at least take the perishables from the railway line and take them past the obstacle and to their destination without undue difficulty and undue cost.

THE CHAIRMAN: You are saying it is an advantage to have a highway along the railroad because it is an alternative method of transportation in the event of a tie-up or



strike?

MR. TAYLOR: Yes. I would like to emphasize that point -- as well as being a means of getting the materials in to construct the railway grade in the first place.

(e) River Crossings: In order to reduce construction costs, the crossing of large rivers and other bodies of water must of course be kept to a minimum. It is noted that crossings are not required on this route over the Athabasca River, the Peace River or the Slave River. Other crossings are relatively small.

As a matter of fact, the Slave River would not be involved unless you went very far east, much farther than anyone has ever suggested; and other crossings on the Grimshaw route are very small.

II Factors in the Cost of Operation on the Grimshaw Route

Another important factor is the cost of operation which will involve maintenance costs, line gradients and fuel costs.

(a) Maintenance Costs: In order to avoid excessive maintenance costs the railway line should have adequate drainage with a minimum of snow, flood and slide clearings. The more stable the ground upon which such a railway is built the closer these objectives are achieved. The Grimshaw route to Pint Point has relatively



attractive features in this regard. Drainage problems encountered by highway construction have been solved without any great difficulty and the snow conditions on a relatively high graded roadway are such that construction can eliminate much of the snow drifting. The Grimshaw route also avoids the Peace River valley which is highly susceptible to slides. Our studies and experience indicate that this entire valley is susceptible to sliding conditions and it has only been through the expenditures of very large sums of money that the Department of Highways has been able to cope with these conditions at the Dunvegan and Peace River crossings. It appears that any other crossing of this valley will require similar expenditures.

In that connection I should like to suggest that it might be wise for your Commission to ascertain what the cost has been for the railways through the Peace River valley between Edmonton and Grimshaw. A number of years ago, after expenditures of large sums of money, the railway insisted on passengers getting out of the trains and walking down the Peace River valley. They have spent large sums of money on slides already, and they have now stabilized the one area, and I would suggest that similar expenditures to that which have been already undertaken,



which goes into the thousands of dollars, would be a very vital factor on the maintenance of any other crossings in the Peace River valley, and on the McMurray route it would be necessary to cross the Peace and the Athabasca rivers.

THE CHAIRMAN: Can you tell us how much has been spent in regard to the highway?

MR. TAYLOR: I haven't the figure right at my fingertips, sir, but we have spent some thousands of dollars in stabilizing the grade down the Peace River hill. It is a very susceptible soil, and there are also underground waters found throughout that valley, and it is a case of getting that water out of the grade in order to stabilize the grade, and it runs into thousands of dollars.

THE CHAIRMAN: I am thinking that that applies throughout the whole of the Peace River valley.

MR. TAYLOR: Our experience with the Peace River valley throughout the Province of Alberta definitely indicates that those same banks are found, some instability is found throughout the whole Peace River valley.

THE CHAIRMAN: How long a stretch?

MR. TAYLOR: We have not been able to locate any area in the Peace River valley where there are sound foundations for bridges



for crossings.

THE CHAIRMAN: In how many miles of the valley does that prevail?

MR. TAYLOR: Anywhere in the Province of Alberta.

THE CHAIRMAN: Have you surveyed the whole valley?

MR. TAYLOR: I wouldn't say we have gone into minute details, but we have carried our reconnaissance in the entire valley, and the same characteristics are found in the valley to the west, even in British Columbia.

THE CHAIRMAN: Does that go as far east as Peace Point, your reconnaissance?

MR. TAYLOR: Yes. Some of the reconnaissance has not been definite drilling; I don't think we have made any actual drillings east of Fort Vermilion, a line north and south through Fort Vermilion, but there are certainly indications that the same characteristics are found to the east of that point.

(b) Line Gradients: Our studies indicate that very low gradients can be secured along the entire route from Grimshaw to Pine Point. Consequently, there would be no excessively steep grades and faster schedules and reduced maintenance would result.

(c) The cost of fuel to any railway line



is, of course, of prime importance, and as the railways have dieselized their tractive units advantage could be taken of the nearness of the Grimshaw route to the refineries already established in the Peace River area.

The engineering factors are relatively attractive along the Grimshaw route.

THE CHAIRMAN: When you speak of engineering factors, that is a statement which summarizes what that was done for?

MR. TAYLOR: Yes.

THE CHAIRMAN: You don't intend that to express any new items?

MR. TAYLOR: No. That is a summary of what we have endeavoured to submit.

The Potential

A railway must have some assurance of a long-time operation. An investment reaching the proportion that this one will, must be positively assured of continuing business for many years to come.

We submit that the potential on the Grimshaw route is one of definite promise for the future.

(1) As referred to previously the report of the Royal Commission on the Development of Northern Alberta (page 94) stated that "the proposed Grimshaw line . . . would substantially



lower transportation costs (for the area). This railway would traverse the best agricultural land that remains in the north."

The haulage of agricultural production and products required for the operation of modern agriculture can be reasonably expected to provide an ever-increasing volume of traffic for a considerable time to come.

The following table gives some indication of the agricultural potential of the area involved.

ESTIMATES OF LAND AVAILABLE FOR
AGRICULTURE ON THE UPPER PEACE

Classification of Agricultural Land

<u>Improvement District</u>	<u>In Farms 1956</u>	<u>Arable</u>	<u>Doubtful Arable</u>	<u>Pasture and Woodland</u>
- a c r e s -				
No. 138	377,687	320,000	N11	286,000
No. 144	N11	N11	22,000	2,791,000
No. 145	1,484	1,013,000	791,000	2,246,000
No. 146	<u>16,425</u>	<u>622,000</u>	<u>113,000</u>	<u>4,520,000</u>
Total	395,596	1,955,000	926,000	9,843,000
147 & 149*	<u>99,957</u>	<u>500,000</u>	<u>-</u>	<u>1,000,000</u>
Total	495,553	2,455,000	926,000	10,843,000

* Present plans are to complete an aerial survey of the Fort Vermillion and Hay Lakes districts this summer, and detailed land classification data will not be available until late next winter. The figures shown here are considered to be conservative guesses.



It appears that a possible total of two million acres of arable land may be occupied in the future. In addition, in excess of ten million acres is available for pasture and woodland.

A railway would not only derive business from the present settlement but it would enhance and encourage further settlement as far as farms and other settlements are concerned.

(2) Reference has already been made to the timber potential, and I refer you again to the Department of Lands and Forests.

(3) The population of the area will increase substantially in the years ahead, and we definitely believe that this is so.

(4) The present development of the Peace River area envisions further development such as refineries, scrubbing plants, petro chemical industries, smelter plants, meat packing plants, flour mills, food and dairy processing plants.



The Most Important Factor of All

No one will deny that all factors are important. There is, however, one very basic factor that cannot be ignored. It might be termed the end objective of the entire enterprise, or the most important factor of all. I refer to the sociological or human factor.

Is the primary objective of this railway to open up new country in order to exploit the mineral wealth thereof or is it to serve settlements of people? That is the question. It may well be that your recommendation to the Government of Canada will hinge directly on your answer to this question.

The route from Waterways clearly exemplifies the first point of view, namely, to build the railway in order that great mineral wealth may be exploited. It is one logical and natural point of view. No one can successfully argue that the close proximity of such a railway line to the Canadian Shield would not be a tremendous boost and advantage in opening up this potentially rich mineral area.

The route from Grimshaw exemplifies the other point of view, namely, that a railroad primarily should be built to serve the present and future populated areas. While subscribing to this view, the Government of Alberta does not



thereby imply that the other concept is without merit. Both should be fully and impartially considered and the final decision should be based on an unbiased assessment of the evidence indicating which of the two routes will bring the greatest measure of benefit to the largest number of people. The Government of Alberta believes the Grimshaw route would achieve that objective.

THE CHAIRMAN: Thank you, Mr. Taylor.

You don't mind if we ask you a few questions?

MR. TAYLOR: Not at all, sir.

COMMISSIONER GAINER: Mr. Taylor, we are interested in this matter of gradients to a considerable extent, and we have had a little bit of argument on the extent which the gradients on the Grimshaw route might lead to lower operating costs, having in mind that the Grimshaw route extension would, of course, form a part of the total whole, we will say, to smelters, or something of that sort.

In the event that a large tonnage of ore concentrate would come south what would be your opinion on whether or not the present crossing at Peace River would be able to handle for long the kind of tonnage that might be coming out of Pine Point, for instance, without either a high level crossing or re-routing the present



grades along the bank?

MR. TAYLOR: So far as a railroad is concerned?

COMMISSIONER GAINER: Yes.

MR. TAYLOR: I can see no reason why it wouldn't carry a heavy load for many, many years to come.

COMMISSIONER GAINER: At the present grade?

MR. TAYLOR: Yes.

COMMISSIONER GAINER: Would you say it is a substantial grade or not?

MR. TAYLOR: I think it is quite a substantial grade, and I think even more substantial than the grade between Edmonton and McMurray.

COMMISSIONER GAINER: Would you have any idea what the gradient is on the hill -- if I may put it that way -- there?

MR. TAYLOR: I think it is about two and a half.

COMMISSIONER GAINER: You think that would have very little effect on the operating costs of tonnage moving across there?

MR. TAYLOR: The fact that there is one gradient of that undersirable dimension would hardly determine the costs of a distance of several hundred miles; and there is no indication that the most desirable gradients couldn't be secured from



Grimshaw right to the northern point, Pine Point.

I do not feel, from looking at the topographical sheets, that as good gradients could be secured from McMurray north to Pine Point. For instance, the topographical map shows very boggy land in many places. It shows the spot elevation running from 500 to 2700 feet and above. We feel the Birch Mountains must be gone through and there is a tremendous mass of bog land which will have to be traversed with consequent greater difficulty and tremendous expenditure to get comparable gradients on the McMurray route as compared with what can be secured on the Grimshaw north route.

I would like to say that we have extensive profiles of the entire area from Grimshaw north, and we would be pleased to make these available to the members of the Commission.



COMMISSIONER GAINER: I think the thing

I am concerned with is the total haul. Let's see from somewhere on the Slave Lake to Vancouver, Edmonton or beyond. Do you think that no gradient on the east and beyond and south would not exceed $2\frac{1}{2}$ per cent at presently included in the Peace River crossing and the other routes? This is something I should think would be of concern to the railroads as a matter of operating costs, the extra power units and fuel, and so on, involved?

MR. TAYLOR: I believe it will be most difficult and most costly to get comparable gradients on the route. Even as good a gradient as presently exists on the Grimshaw line cannot be got on that line, and there is evidence that it will be much more costly and doubtful if a comparable gradient can be secured.

COMMISSIONER THOMPSON: In your investigations along the Mackenzie highway up from Grimshaw to the boundary you didn't find any evidence of fluxion or soil creep. After you got beyond the Peace River valley the country is good for building?

MR. TAYLOR: No, we found no evidence of sliding or unstable soil. There is some evidence of muskeg, but it is possible to stay on high ground. Crossings that are there are comparatively simply engineering projects.

THE CHAIRMAN: You told us that the Government has extensive profiles, and I think you said you got them when you were building the Mackenzie highway. I take it you have no profiles in the east?

MR. TAYLOR: No.



THE CHAIRMAN: Have you any information, detailed information on the eastern route?

MR. TAYLOR: Mr. Justice and gentlemen, we do not have any detailed information on the eastern route. We have not carried out any detailed surveys and our information is simply gathered from topographical maps, spot elevations and aerial flight over the route.

THE CHAIRMAN: You have areial photographs.

MR. TAYLOR: We have aerial photographs, yes.

THE CHAIRMAN: You have told us that the Premier has offered free right of way for a railway north of Grimshaw. Can you tell us whether that offer includes free right of way if the railway was built anywhere else?

MR. TAYLOR: That point has never been considered, sir. The offer has been on the right of way from Grimshaw and north, and there has been no request for or consideration of free right of way on any other route. It would be something the Government would have to consider if that choice had to be made.

THE CHAIRMAN: The problem hasn't arisen.

MR. TAYLOR: That is right.

THE CHAIRMAN: You have given us an estimate of the timber north of Grimshaw. Have you made a comparison between what timber there is there and the timber that might be available between Waterways and Fort Smith?



MR. TAYLOR: We have made a comparison as far as the Lands and Forests calculations or surveys have been concerned, and there are much greater timber berths on the western route as compared to the eastern route. We have not made any analysis in the Wood Buffalo Park, and apparently there is some good timber there.

I think there are two factors which should be considered in that regard. The further east you go the thinner the timber becomes and the poorer the timber becomes, and either through the types of the soils or other reasons it is not possible to get a growth as nearly as rapidly as on the western edge. I have made no analysis of the timber in their respective areas, but the Department of Lands and Forests have definitely said that the timber deposits or the timber berths are far greater on the western route.

THE CHAIRMAN: Do you know whether that includes the Wood Buffalo Park? Suppose you add the Wood Buffalo Park timber to the other timber that is along the eastern route, would you say it is still less than what there is --

MR. TAYLOR: I believe it would be considerably less; but I don't think the Department of Lands and Forests has ever calculated the actual timber in Wood Buffalo Park. It is not in their jurisdiction.



THE CHAIRMAN: Have they made any comparison of the board feet between what is in the east and west? We have evidence of what is in the Wood Buffalo Park, and if we made some arithmetic we could find out what the comparison is.

MR. TAYLOR: I haven't any figures, other than the Department of Lands and Forests table indicates that the amount of timber available in the west is far greater than in the east. I think comparable figures could possibly be supplied, but I don't have the figures here at the present time.

THE CHAIRMAN: If we had occasion to go into it, do you think we could obtain that from the Department of Lands and Forests?

MR. TAYLOR: Yes, they should have that information.

THE CHAIRMAN: If you have occasion to be looking into it we would be grateful if you would tell us what it is, but I think we might be able to get in touch with them.

MR. FEEHAN: I think a great deal of that information is obtained on page 49 of the McGregor report.

THE CHAIRMAN: Yes. That goes back quite a few years. I think there has been more work since then.

MR. TAYLOR: Yes.



THE CHAIRMAN: Where is that, Mr. Feehan?

MR. FEEHAN: It would be on page 49 and also on page 20 of the McGregor report.

MR. BALDWIN: It is contained in my oral submissions.

THE CHAIRMAN: Would anyone like adjournment to discuss with Mr. Feehan, the Commission counsel, the question of any further questions which you would like put to Mr. Taylor?

MR. BALDWIN: If it pleases the Commission, could we have a brief adjournment, to brief counsel?

THE CHAIRMAN: We will adjourn for five minutes, and Mr. Feehan then may have some questions.

---Short recess.

THE CHAIRMAN: Mr. Feehan, have you some questions that you would like to ask Mr. Taylor?

MR. FEEHAN: I have, sir.

Mr. Taylor, you have mentioned the sliding on the Peace River throughout the area of the river which would extend as far as Wood Buffalo Park? From there it would appear that the land changes from cretaceous to paleozoic. Have you given this matter any thought as to the stability of the banks?

MR. TAYLOR: No, we have not made any detailed study of the banks east of that point.



Our general conclusion that the entire Peace River banks are unstable is gathered from the experiences which we have had in the valley.

MR. FEEHAN: No drilling operations have been carried on to test the sub-soil in any portion, then, of the paleozoic area?

MR. TAYLOR: No, we have not had any occasion to do any drilling in that area.

MR. FEEHAN: As you know, Mr. Taylor, this Commission sat at Fort McMurray a few days ago, and one of the largest concerns in that area was the complete inaccessability of the area to road traffic. In the event that a railway was to be constructed from the west route, that is through Grimshaw, would your department consider construction of a highway north of Lac La Biche to Waterways?

MR. TAYLOR: Frankly, Mr. Justice and gentlemen, I can't see the connection between the construction of a railway and the construction of a highway north of Lac La Biche. The route there consists of very heavy construction, very costly construction, as much of it is through heavy muskeg area and some of it very, very heavy sand areas. We plan a highway or construction of a road from either the Athabasca or the Wandering River area or the Lac La Biche area in our long-range plans, but we feel it has to take its proper



place in the Province in the development of roads. It would be very, very unfair to the people in heavily populated areas to spend vast sums of money over 240 miles of muskeg before many areas with much heavier populations have been served. We spent some 70 thousands of dollars on a reconnaissance on a winter road project from Lac La Biche to McMurray some few winters ago. That was largely for securing a line for a winter road, and it would be used extensively if the waters of the Athabasca ever got as low as they did in 1944. That is the basis of a road for some time in the future, and we are presently looking over the forestry road which runs partly over that area. But I think in fairness to the rest of the people in the rest of the Province a road from Lac La Biche to McMurray will have to take its proper place in relation to the rest of the Province.

MR. FEEHAN: Would it be fair to say that if the railway took the western route the proposed eastern route would remain for many years completely inaccessible to road traffic?

MR TAYLOR: I don't think it would, because the development on the eastern route will be carried out irrespective of whether a railway goes from the east or from the west. As a matter of fact, I would think that if a railway went from the east there may be a very sound reason to delay any road projects.

MR. FEEHAN: Mr. Taylor, you spoke of



the lumbering industry in the Peace River area. Would it be at all feasible if the railway took the eastern route to Peace Point so that lumbering in the Peace River, emptying logs into the Peace River -- let them float downstream to Peace Point and let them take them by rail to whatever points they wish to go.

MR. TAYLOR: I am in no position to answer that question. I don't know whether it is feasible or economical. I think anyone who was experienced in that business would have to answer that question.

MR. FEEHAN: It was suggested at an earlier hearing, and I believe the place was McMurray, the Government of the Province of Alberta may have entered into a contract with the railways that no road would be constructed to McMurray for many years. Is there such a contract or agreement in existence?

THE CHAIRMAN: If I may interrupt, I would like to point this out to Mr. Taylor, that if he feels that somebody's questions are not relevant, we would be glad to give a ruling on it.

MR. TAYLOR: Mr. Justice and gentlemen, I know of no contract or agreement that the Alberta Government has entered into with the railways in regard to highways between Lac La Biche and



McMurray, and I doubt if such an agreement is in existence.

MR. FEEHAN: You will understand I am not trying to be embarrassing, sir. I just feel that these matters ought to be brought out because they were mentioned to me.

THE CHAIRMAN: Yes, but I want Mr. Taylor to realise that he has the right to ask to be excused from answering questions.

MR. FEEHAN: Have you any knowledge, Mr. Taylor, of any prospecting or any search for mineral deposits in the pre-Cambrian or north east Alberta area? I suppose that could be obtained from the Department of Lands and Forests, if there is any information?

MR. TAYLOR: Mr. Justice and gentlemen, are you referring to the Canadian Shield?

MR. FEEHAN: Yes.

MR. TAYLOR: Yes, I have some knowledge of that, because for a time I was chairman of the Research Council of Alberta. They have carried out some extensive investigations of that part of the shield which lies in the Province of Alberta. Much of that information is not ready yet to be released, but the Research Council will be releasing it in the form of reports in the not too distant future.



MR. FEEHAN: I was wondering if there would be any possibility of those reports being made available to this commission prior to its final report to the Federal Government.

MR. TAYLOR: I am not presently chairman of the Research Council of Alberta, but all of the reports that have been issued I am sure will be made available at your request. Whether the reports that are presently being prepared could be prepared in that time is very questionable. I would suggest in that connection that a railway from McMurray is a long, long way from that section of the Canadian Shield which lies to the extreme north east of the Province.

MR. FEEHAN: You will agree, though, Mr. Taylor, that it is 250 miles, closer than the western route would be.

MR. TAYLOR: Oh, yes.

MR. FEEHAN: I was interested also in that portion of your brief which dealt with the relative lateral bearings of Pine Point and Grimshaw. According to our calculations, Grimshaw lies at least 96 miles to the west of Pine Point. Would that be correct?

MR. TAYLOR: I believe it would be. It does lie to the west. The point we are making when we say it lies almost directly, over a distance of 300 miles, the distance from Grimshaw towards the



east, in order to reach Pine Point, is a relatively very small distance.

MR. FEEHAN: Have you any knowledge, Mr. Taylor, of any diving operations that have been carried out at the abutments of the Peace River Bridge at Peace River to determine the condition of the abutments?

MR. TAYLOR: No, I have no knowledge on that. The Peace River Bridge is under the jurisdiction of a railway. We simply pay a rental to use it.

MR. FEEHAN: I realize that the Peace River Bridge, using both rail and road traffic -- at least I understand that you are merely paying a rental fee; is that correct?

MR. TAYLOR: That is right, sir. We have, of course, carried out very exhaustive studies of the same river at the Dunvegan crossing. There is a road to resources program being conducted in the area between High Level and North Meridan.

MR. FEEHAN: Can you tell us about that?

MR. TAYLOR: Yes. Some years ago the Federal Government and the Provincial Government -- this is almost immediately after the war -- entered into a contract to build the road from Grimshaw north to Hay Lakes on a two third-one third basis as a development road. The Federal Government at that



time placed a maximum amount on its contributions. In building a road it is impossible to build even a development road on the amount of money allotted, so the development road was put there by the Province supplying additional monies, and the final breakdown of those costs was that the Federal Government paid forty eight per cent and the Provincial Government paid fifty two per cent. That is a year and a half ago. The present Federal Government approached the Province -- or at least discussed with the Province the matter of improving the Mackenzie Highway to modern-day and present-day standards. We had been making representations along this line to the previous Government, and we were most happy to cooperate with the Federal Government in the improvement of the Mackenzie Highway, because the amount of traffic on that highway has been increasing every year and, we believe, will continue to increase, and a development road built to development roads specifications is not satisfactory in carrying that traffic. So we entered into an agreement with the Federal Government whereby a road from Grimshaw north to the Alberta boundary and thence to Hay Lakes would be built on a 50-50 basis, excluding certain items such as right of way, some other features, and the Federal Government is



providing up to fifteen of the 15 million dollars over the next five years. This has been matched by the Province; the engineering is being done by the Province and approved by the Federal Government. We are building the sub-grades for a modern highway of 44 foot alignment, and contracts have now been let for all of this work right from Grimshaw to the North Alberta boundary. This work will be completed over the next five years, and the standard at that time achieved will be a good modern gravel road. To date the Federal Government has not given any indication that it will go beyond the gravel stage. Eventually I am sure it will, I am sure it must, but present plans are for a 44 foot alignment, and the construction will be such that it can be constructed to be able to carry any kind of weight.

In our discussions with the Federal Government it has been decided that if there are sufficient monies left after the highway is constructed from Grimshaw to the north west boundary, Alberta north west boundary, from the 15 million dollars, we will then match that sum in constructing a highway from High Level as far east as the Wood Buffalo Park. We already have a road from High Level to Fort Vermilion and nothing beyond there. The price indicated on the Mackenzie Highway



indicates that there will be that much left. We have completed a road from north of Fort Vermilion to Wood Buffalo Park, and I believe the Federal Government has plans for the continuation of that road through the Wood Buffalo Park. If there is sufficient money left out of the 15 million dollars, out of the total of 15 million dollars -- I think I indicated that the Federal Government is providing 15 million dollars; that is correct -- one half of 15 million -- then that road from High Level will also be constructed.

MR. FEEHAN: The proposed continuation by the Federal Government in the Park would take the road to Fort Smith and thereby right through Edmonton.

MR. TAYLOR: Yes. In that connection I would draw your attention to a report submitted by the Department of Northern Affairs under the caption "The Economic Prospects of the Northwest Territories," prepared by Mr. R.G. Robertson, the Commissioner of the Northwest Territories, and shows two maps, one showing the present roads in the area and the other one a projection of those roads which the Commissioner hoped would take place some time between 1955 and 1970. As a matter of fact, the projection goes right up to 1980, and that will indicate that by that time a road is constructed



from Pine Point through Wood Buffalo Park, through Fort Vermilion to join up with the Mackenzie Highway.

THE CHAIRMAN: How would that road go? You say from Pine Point to Fort Vermilion, through the Wood Buffalo Park.

MR. FEEHAN: I believe he said from Pine Point to Fort Vermilion.

MR. TAYLOR: Correction -- from Fort Smith through the Wood Buffalo Park, north of Fort Vermilion, not Pine Point.

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The projection also goes to Pine Point.

THE CHAIRMAN: From Fort Smith to Pine Point?

MR. TAYLOR: Yes, from Pine Point south to Fort Smith then in a south westerly direction to connect up with the MacKenzie Highway at High Level. I would also draw your attention to this map and to this study because in 1955 the Department of Northern Affairs shows on their 1955 map the lack of railway facilities from Grimshaw north. Then in their projection they have shown a railway from Grimshaw north to the Great Slave Lake area or to Pine Point. I would respectfully suggest that the Department of Northern Affairs in this study found that the construction of a railway from Grimshaw north paralleling the highway would be of tremendous value. As late as 1955 they carried out plans, projected plans, for the construction of that highway. In their submission on page 24 and for several pages immediately after Commissioner Robertson gives a number of very excellent reasons what the road from Grimshaw to Pine Point would actually do for the Northwest Territories. I would respectfully suggest those few pages, at least from page 24 to page 30 be given considerable study because they show the results of an exhaustive study by the



Department of Northern Affairs who are responsible for that area. One other comment in that connection: The Department of Northern Affairs showed no further rail connection from McMurray north from that which exists at the present time. They did show the rail connection in their projected study from Grimshaw to Pine Point.

MR. BALDWIN: That was the brief I filed with the Commission with those pages underlined.

MR. FEEHAN: In that same brief, Mr. Taylor, is there not projected a highway from McMurray north as early as 1980?

MR. TAYLOR: There is no projection shown in the brief to my knowledge from McMurray because that was beyond the scope of this Commission. It was within their scope, however, to deal with items that definitely concerned the Northwest Territories and I imagine they felt a very definite responsibility for the Wood Buffalo Park which is under Federal jurisdiction.

COMMISSIONER GAINER: I do not quite understand. In what sense was it beyond the scope of the Commission? Which Commission?

MR. TAYLOR: It is the Northwest Commission, Commissioner Robertson's study.



COMMISSIONER GAINER: Was that not a submission to the Gordon Commission?

MR. TAYLOR: Yes, it was presented to the Royal Commission on Canada's 'economic prospects.

COMMISSIONER GAINER: What was your suggestion that they would not be concerned with total developments?

MR. TAYLOR: I should not say they would not be concerned, I would feel that an economic study carried out by the Department of Northern Affairs would have little reason to deal with road possibilities from Athabasca or Lac La Biche into the north any more than from a great many other points.

COMMISSIONER GAINER: But they should have as much concern?

MR. TAYLOR: Oh, I think they would be concerned, yes.

MR. FEEHAN: I have no further questions.

THE CHAIRMAN: I think you said something about traffic on the MacKenzie Highway increasing steadily since it was built. Has there been much increase during the past few years?

MR. TAYLOR: Sir, there has been a very great increase in traffic. The traffic has increased to the point where the developed road was just unable to cope with the traffic and had the Federal Government not come in we would have had to



rebuild or build the MacKenzie Highway to modern highway standards. The building of the sub-grade now I think is going to further increase the traffic to the point where consideration will have to be given to black topping the road in the not too distant future.

THE CHAIRMAN: Do you know what the nature of the increase is?

MR. TAYLOR: I am sorry, I have not got the actual traffic counts here but we do have actual counts on traffic for certain years and I would be glad to supply those to you.

THE CHAIRMAN: We would like to see those.

MR. TAYLOR: There has been a great increase in the amount of traffic.

THE CHAIRMAN: I would like to know whether there appears to be some industrial development or any kind of development that appears to have taken place as a result of the highway going in. Do you think your figures indicate anything in that regard?

MR. TAYLOR: The figures would indicate that a vast amount of the travel on the MacKenzie Highway is due to trucking of goods from Edmonton to the Northwest Territories or from Grimshaw to the Northwest Territories and bringing



goods back. That has been the major reason for the increase and I think that is a very excellent reason why the people of Canada should be paying part of the costs of the construction of this highway.

COMMISSIONER GAINER: There is just one other thing I would like to ask: Mr. Taylor, we have a problem of attempting to devalue commercial problems as well as population distribution and in trying to evaluate your remarks about extension of the highway from Lac La Biche and the time in which this might take place it is quite evident that the amount of traffic on the eastern route is larger than even on the west. I am thinking now of water. A good deal of this, a large proportion of this comes from Lake Athabasca. Would it be fair to ask you for a comment on what place this volume of traffic would take in the total picture so far as highway and other communication developments would be concerned in that eastern portion you told us would fit together with population figures and so on or what that Lake Athabasca area would have to do.

MR. TAYLOR: I think the only comment I can make on that is that in 1954, I believe, when the waters in the Athabasca River were very low there were several hundred tons of cargo left at



McMurray that they were unable to move on into the Uranium City area and vice versa. At that time we had a very strong representation from the people of Uranium City asking that something be done to connect up with McMurray, the end of steel, so they could get these goods through movements of trailer trains, tractor trains over that road. When the waters are high and since that time ^{they} have been comparatively high, there has not been that problem. I would think in generally dealing with the problem you have raised that it would be finally a matter of rates on how this freight would travel from Uranium City into the north. If all three routes were available for you, if there was a highway and a railway I think there would be a level that would be dependent on rates the same as in the rest of the economy. Some goods would naturally go by water, some naturally by rail and some naturally by highway truck. What the proportion would be or what the final analysis would be I do not know other than to say there would certainly be a great reduction in the amount presently being hauled by barge.

COMMISSIONER GAINER: I was thinking mainly of the winter in accessibility. Incidentally, were the major demands or requests in connection with McMurray, would these be for winter



haulage? It would not have too much to do with water levels except in the fall and late summer months?

MR. TAYLOR: Yes, because it is just to the shores of Lake Athabasca and they would have to get across the Lake.

COMMISSIONER GAINER: And their problem was accessibility in the winter months?

MR. TAYLOR: That is right.

THE CHAIRMAN: Thank you very much, Mr. Taylor.

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SUBMISSION OF
ALBERTA AND NORTHWEST
CHAMBER OF MINES AND RESOURCES

Appearances:

Mr. E. A. Cawker	President
Mr. G. H. Finland	Manager

THE CHAIRMAN: If you will come forward,
Mr. Cawker.

MR. CAWKER: Mr. Chairman, I would like
Mr. Finland to take a seat beside me. The reason
for this perhaps you know but perhaps the others
on the Commission do not know, but I am an insur-
ance man who is president of the Chamber this year.
Mr. Finland is a mining engineer, a man well quali-
fied to answer questions which I am not so able to
answer. From what I have heard this morning I
think you people are capable of asking those
questions. If I may, I would like with your per-
mission to read this brief and for the question
and answer period following this call on Mr.
Finland.

Mr. Chairman and gentlemen: In present-
ing a brief to this Commission, the Alberta and
Northwest Chamber of Mines and Resources desires
to be helpful in solving the problem of having
the proposed railroad located on the most economic



route that will best service the interests of all Canadians. As the decision to build this railroad was announced in the Speech from the Throne over a year ago and further implied by the appointment of this Commission to study proposed routes, this Chamber hopes that construction will be started without further undue delay.

The necessity to build the railroad to Great Slave Lake arose when the lead-zinc ore body at Pine Point was proven to be of sufficient size and grade to provide a large concentrating plant. It was only on assurances from the Consolidated Mining and Smelting Company that this mine should be readied for production that the Federal Government considered the construction of the railroad as a feasible project. The Pine Point mine continues to be the major economic consideration relative to building this railroad.

The Government has now decided that it is necessary to get rail transportation to the Great Slave Lake. This Chamber is in full accord with this view.

General Considerations

We feel it should be noted that the Pine Point railroad and the Mackenzie highway are both considered as transportation arteries to develop the country. It is to us inconceivable that the second development road to be built would be built right



beside the first one.

While the possibility of a railroad was considered over a period of years, the railways consistently maintained that it would be necessary to indicate a minimum tonnage of freight before they could consider building it. They pointed out that this minimum tonnage of freight was not an indicated possibility on any basis along the highway route from Grimshaw.

All phases of the Pine Point railroad have been studied over the past four or five years. Following procedures of good engineering and sound economy, practical answers have been reached.

Engineering

Engineers have scouted both routes and have done the necessary on-the-ground surveying to conclude that both routes are feasible regarding construction problems but the Waterways route has a far more favourable grade. The route north from Waterways was found to be shorter than the route from Grimshaw by a sufficient distance to compensate for the cost of bridges across the Athabasca and the Peace rivers.

Construction costs over both routes are estimated to be about the same but the more favourable grade on the Waterways route gives definite advantages to this route. The better



grade and reduced mileage provide more favourable operating conditions from Waterways.

These have been recognized and used in computing freight rates which, we understand, are more favourable to shippers on this route.

Indicated Traffic

The freight to and from Pine Point is of course the major item of traffic, for without it this railroad would not be an economic project.

It is estimated that this mine will provide southbound (ore shipments) and northbound (supplies) freight of close to 350,000 tons per year. This, of course, is expected to increase as production increases and growth increases later on.

A further 100,000 tons of mine freight for the Uranium City area is considered to be potential traffic for this railroad.

Mine and general freight for Yellowknife and points along the Mackenzie and the far north amounts probably to 100,000 tons.

The wood products industries of the northeast Alberta and Wood Buffalo Park area have a freight potential of another 100,000 tons of timber, plywood and pulpwood, but these industries cannot be fully developed without railroad shipping facilities.

There are also currently about 20,000



tons of southbound freight to which may be added freight to the oil-sand area, supplies for northern defence, power development and other industries in the Fort Smith area, and other sundry items to a possible total of 100,000 tons.

The above indicated 750,000 tons of freight which is the minimum required, we understand, for an economic operation, would be reduced by 275,000 if the railroad followed any other route.

Potential Traffic

Of great significance in considering potential traffic for this railroad, is the vast area of precambrian rocks lying east of the Slave River and between Lake Athabasca and Great Slave Lake. Many mineral discoveries have been made in this area, including a copper-nickel deposit which is located east of the Slave River and north of Fort Smith and on which exploration work is currently being carried out. These discoveries readily emphasize the possibility of a railroad near the Slave River serving more than one mine east of the river. It is also considered possible that other deposits might be found similarly located to the Pine Point mine, along the western contact of the Precambrian.

It is also important that the Precambrian area adjacent to Lake Athabasca be considered to have real possibilities of mineral



production in the area extending 250 miles east of this proposed route for the railroad. Gold, copper, nickel, iron, uranium and other metallic finds have been made in this area. It is reasonable to expect that more intensive prospecting and geophysical exploration will result in new mines in this area that can be served by this railroad and connecting barges. Such improvement in transportation would bring about increased activity in prospecting much sooner.

The whole Great Slave Lake area and the north beyond it, especially the Precambrian areas to the east and northeast, offer unlimited possibilities for the development of freight traffic for this railroad. At the same time, the railroad would so improve the economy of the area that exploration and development would be greatly stimulated.

Other Factors

It is important to recall that occasionally low water occurs in the Athabasca River. This was very serious in the days when 20,000-30,000 tons had to be lightered over shallow water.

THE CHAIRMAN: Mr. Cawker, if I may interrupt you here, you say it had "... to be lightered over shallow water." What does that mean?



MR. CAWKER: It had to be transported by other means. That is to say, you have got to put them in much lighter bottoms to get them down.

With low water in the Athabasca River today, it would be impossible to move the huge tonnage of freight that the mines now require. A railroad north from Waterways to the Peace River would provide urgently needed assurance that this ever-increasing volume of freight could be handled under low water conditions.

Looking ahead a few years, when a dam might be built on the Peace River, lower water in Lake Athabasca would be assured over a period of several years while this dam was being filled. This could bring about a serious situation without a railroad to the Athabasca area.

THE CHAIRMAN: If I may interject at this point, why would that be the situation?

MR. CAWKER: Mr. Finland?

MR. FINLAND: The Peace River contributes substantially to the water level in Lake Athabasca. In fact, there was a novel written about it. The water north of Fort Fitzgerald flows both ways. When the Peace is in flood it will raise Athabasca by 12 feet. With that and normal flow suspended by the dam, and with the preliminary estimates and the preliminary legislation based on the fact that on the Peace River



dam it will take seven years to fill the dam, then this large amount of water will be held from the Lake Athabasca area.

THE CHAIRMAN: And is it the low water flow of the Athabasca that has caused the trouble you have beside Lake Athabasca?

MR. FINLAND: It is running into Lake Athabasca; it is at the entrance to Lake Athabasca -- the delta of the Athabasca River; and the level of Lake Athabasca will be affected.

THE CHAIRMAN: That is where the low water causes the trouble?

MR. FINLAND: Yes.

MR. CAWKER: To develop the North and to bring about its great potential contribution to the general growth of the national economy, one major requirement stands out. That is a greater search for minerals which means more prospecting and more exploration and geophysical work. A new impetus is needed to stimulate this activity and there is possibly nothing that would be as effective as a well located railroad to assure the prospector, the mining engineer, and the financier that the government has carefully considered plans for improving the economy of the North.

From the Records

Two years ago, the Government of



Alberta had a Commission study the economic outlook of northern Alberta. This study included all aspects of the location of the Pine Point railroad and led to the unreserved conclusion that for sound economy, good railroading, and in the best interests of the country as a whole, the extension from Waterways was the only feasible route. The report of that Commission states:

"While the building of a railroad from McMurray will be a great disappointment to the people on the Manning area, nevertheless, it appears to the Commission that considering the good of the province as a whole, the most good will come by a railroad from McMurray. This does not preclude the possibility that a railway may some day be extended to Manning when increased settlement and increased activity in the oil and timber industries lead to sufficient increase in population and amount of freight in sight to warrant its construction.

"A railway to Pine Point is a necessity. It is of great economic importance to Alberta, as well as to the Dominion of Canada. The route chosen should be that from McMurray north, as in that location, it will be of greater service and value than if built along any other route."



In the Financial Post of March 17 this year, the whole question of routing the Pine Point railroad is again reviewed with the added emphasis that the western routing would require a \$65 million subsidy. This article reports that the railroads will build the Pine Point railroad from Waterways for a \$20 million subsidy. Surely that is a significant answer when the railways have to build and operate the line. The railways claim they would lose money on the Grimshaw route and this article says: "For this reason the railways won't touch the Grimshaw route". The same article stated further, and without any subsequent denial: "A year ago, the Government decided on the Waterways route". This decision was obviously based on the previous two years' economic and engineering study by railroad and government economists.

Mining Companies

The decision of the Consolidated Mining and Smelting Company of Canada to bring the Pine Point mine into production was made known to the Government over two years ago. There has been no change in that decision which is confirmed in the following quotation from the Northern Miner of August 6, 1959, under this heading:



"PINE POINT MINES SURVEYS PLANT SITE"

"During the past year Pine Point Mines carried out a topographic survey of a proposed plant site at its lead-zinc property on the south shore of Great Slave Lake, N.W.T. This was completed in order that work on the design of the plant could be started in the event that a decision is made to build a railroad to Great Slave Lake, W. G. Jewitt, president, states in the Company's annual report."

The mining companies at Uranium City on Lake Athabasca favour the route north from Waterways for two reasons.

1. Any improvement in transportation facilities will ease their operating problems and will ultimately help to decrease production costs.

2. A railroad serving the Precambrian area, Canada's Mineral Heartland, will render the maximum service to mining and northern development.

For the mining companies now operating out of Yellowknife and for the potential development of the whole Great Slave Lake area, the lowest possible freight rate to the south shore of the lake is the major consideration. Here again, the railways have quoted lower rates on the Waterways-Pine Point route. The mining companies think this route will make the greatest contribution in opening up the North.



Maximum Service

In the above summary, a sincere endeavour has been made to marshal the economic facts pertaining to the question at hand and to align the development potential of the vast mineral areas of the North, to present a realistic picture of the proposed railroad that will assure:

1. The early construction of a railroad that will render the greatest service in aiding and expediting northern development and, at the same time, contribute most in the broad expansion of our national economy.

2. That the railroad will be built on the soundest possible economic considerations involving the lowest possible subsidy charges to the nation.

Conclusion

To build this railroad to the North on an economic pattern through Alberta's oil-sand development area, the timber stands of the Peace River-Fitzgerald area, Wood Buffalo Park, serving the uranium mines of Lake Athabasca, the Fort Smith community and industries, putting the Pine Point Mine on a production basis and then on to serve the whole North beyond, is recommended as the sound and economic answer in locating the Pine Point railroad. No other route would give the country equal value for the



money.

THE CHAIRMAN: Gentlemen, it looks as though we will not be able to finish asking the questions we would like to put to you before noon. Would you like to come back at two o'clock?

MR. CAWKER: Mr. Finland, could you come back at two o'clock?

MR. FINLAND: Yes.

THE CHAIRMAN: Is that convenient for you?

MR. CAWKER: Not for me, I am very sorry. I have an important previous engagement. But this gives me a chance to run out and let Mr. Finland do the job!

We could be represented here this afternoon.

THE CHAIRMAN: That is satisfactory to you?

MR. CAWKER: I am sorry, but I will be unable to attend, but we can be represented here.

THE CHAIRMAN: Well, from our point of view, we want to get all the information we can. Do you feel that somebody can be here who could give us the information as well as you can?

MR. CAWKER: Indeed, yes.

THE CHAIRMAN: I presume that most of what we want will come from Mr. Finland?

MR. CAWKER: Yes.



THE CHAIRMAN: And that is satisfactory to you?

MR. CAWKER: Yes.

THE CHAIRMAN: We have a few questions to put to you now.

COMMISSIONER GAINER: Mr. Cawker, I wondered if it would be of any help to us if you could indicate the rates that have been mentioned for the Waterways to Pine Point? Do you have . . . ?

MR. CAWKER: We had these figures some time ago. I believe we have them in our file.

MR. FINLAND: We haven't got them in our file. They come from Consolidated Mining and Smelting Company. They have assured me that the lowest possible rates have been quoted to them by the railways over the Waterways-McMurray route.

COMMISSIONER GAINER: Do you have the rates?

MR. FINLAND: No, I don't. I have a rough idea. It would be in the vicinity of 2 cents per ton-mile. The best that could be achieved by highway transportation, which was being considered, would be 3 cents per ton-mile.

COMMISSIONER GAINER: Do you remember how much less the eastern route was?

MR. FINLAND: I don't know that difference.



COMMISSIONER GAINER: But we can be sure that Consolidated Mining and Smelting was assured of, and was quoted, a lower per ton rate in the east?

MR. FINLAND: Yes, that is so. I am sure you will get that from your railroad brief. You will get the right answer.

COMMISSIONER THOMPSON: Could we get these figures from C. M. & S.?

MR. FINLAND: I understand the Pine Point company is presenting a brief. They would have that information for you.

COMMISSIONER GAINER: Perhaps I could ask this: In your discussions with C. M. & S. has the question of harbour facilities been raised when they carried out their engineering study?

MR. FINLAND: I don't think -- the major consideration here is Pine Point mine. I don't think they have gone into the harbour question. A lot has been done through the Federal Government engineering department, but I don't think they have the answer yet.

COMMISSIONER GAINER: Could you give us a documentation of some of these studies that have been done, such as engineering studies?

MR. FINLAND: I can't give you anything definite on that; I know it has been done. I am



fairly sure that no conclusion has been reached as to whether Hay River will be the ultimate harbour, or to try to build one in the Ile de Mort which is immediately north of Pine Point; or maybe it would be a less desirable place than another twenty miles of line to get a railway to Great Slave Lake.

COMMISSIONER GAINER: Have they done any drilling around there?

MR. FINLAND: I don't know. I would presume that examination has not been in too much detail. It would not be a matter of drilling; it would be a matter of dredging the harbour, and it requires blocking off and it would be a question of how many loads of material would have to be removed -- possibly the odd million yards at so much per yard.

It might be interesting to talk about this point, that it is thought that, possibly, on the eastern route a spur could go into Bell Rock which is the northern take-off docking facilities and north of Fort Smith; and that that would come to Pine Point only; but that that would give more thinking time to study the eventual and ultimate harbour on the south portion of the Great Slave Lake and still offer a railway terminal to shipping facilities by water into the far north.

MR. BALDWIN: If I may make a reference here, on page 6 there is a statement, talking about



the article from the Financial Post, "This same article stated further and without subsequent denial . . .". I might say that in May 1959, in the House, I asked the Honourable George Hees if there was any truth in that and he said the Government had made no decision.

COMMISSIONER GAINER: That was a statement in the House of Commons?

MR. BALDWIN: Yes; by George Hees; and I think the fact that you gentlemen are functioning is proof that the Government has come to no decision.

THE CHAIRMAN: I would like to ask one question. On page 2 of your brief, Mr. Cawker, you said that engineers have examined both routes and have done the necessary on-the-ground surveying to conclude that both routes are feasible, but that ". . . the Waterways route has a more favourable grade. . .". Are you referring there to any engineering other than railway engineering?

MR. FINLAND: No.

THE CHAIRMAN: So we can ask the railway people for anything we want about that?

MR. FINLAND: That is just to bring out the point.

I am sure that before the hearings are concluded the complete details on those points will be made available.

THE CHAIRMAN: But there is no other



engineering you have in mind?

MR. FINLAND: Not other than through the railroads.

THE CHAIRMAN: Nothing other than the engineering of the railway.

MR. FINLAND: , I think the engineer being called by the Chamber of Commerce has been in the picture personally.

THE CHAIRMAN: On page 3, after referring to the freight, you said: "The above indicated 750,000 tons of freight . . . would be reduced by 275,000 if the railroad followed any other route . . ." Would you mind explaining how that conclusion was arrived at?

MR. FINLAND: The lumber figure mentioned is on the eastern route area.

THE CHAIRMAN: The 275,000 figure -- perhaps you can tell me what the 275,000 is?

MR. FINLAND: That is 100,000 tons to Uranium City -- 100,000 tons of timber and other products -- and 75,000 miscellaneous. That is located, or would be available, on the eastern route only.

THE CHAIRMAN: One hundred thousand tons to Uranium City -- 100,000 tons timber and 75,000 miscellaneous?

MR. FINLAND: Yes.

THE CHAIRMAN: Now, would there not be



some timber coming down the Grimshaw route which, at least, would partly offset the 100,000?

MR. FINLAND: There might be some minimum tonnage. We discussed this with people who have had report information on the timber stands and in that regard the Wood Buffalo area is more mature timber and it is being logged now; and the stands to the west are, for the most part, newer and younger timber and probably not fully matured for marketing at this time.

THE CHAIRMAN: You are assuming, then, in saying that 100,000 tons of timber freight would be available on the McMurray route and not on the other, that no additional timber would come out of the other route?

MR. FINLAND: Well, there are more than likely some minor locations there now, but I don't think the tonnage would be near the proportion.

THE CHAIRMAN: And the 75,000 of miscellaneous tonnage -- what would that include?

MR. FINLAND: There are oil-sands; the gypsum deposit at the Wood Buffalo Park. . .

THE CHAIRMAN: That is gypsum?

MR. FINLAND: Yes; there would be certainly potential tonnage in the Precambrian area to the east of the Slave River.

THE CHAIRMAN: Is there anything developed there, or is that prospective?



MR. FINLAND: That is potential. There is immediate tonnage indicated around the Fort Smith area and in the development of hydro projects there. That is under consideration at this time. There has been no announcement -- no definite plans -- but it is being considered right now.

THE CHAIRMAN: That is all that I have in mind there. Let me just get that. These 75,000 tons might be what you would hope to get from the development of the gypsum products, what comes from the oil-sands and what might come as the development of the Fort Smith area?

MR. FINLAND: Yes, the Fort Smith area.

THE CHAIRMAN: And also might come from the discovery of orebodies just east of the river?

MR. FINLAND: Yes, to the east of the river.

THE CHAIRMAN: Mr. Thompson wants to discuss the orebodies that might be found there and the showings that you have already referred to, but that will be after lunch.

We will adjourn now until two o'clock.

---Luncheon adjournment.



Upon resuming at 2.00 p.m.

THE CHAIRMAN: Mr. Finland, I think there are a few more questions to be asked by Mr. Thompson.

COMMISSIONER THOMPSON: I think most of mine have been answered. There may be one or two that Mr. Feehan wants answered that could be incorporated in mine. I will forego my questions for the present time.

THE CHAIRMAN: Mr. Feehan?

MR. FEEHAN: Yes, sir, I have some questions. Reference is made in the brief, Mr. Finland, that for a period of approximately 7 years while the Peace River project is filling that there would be low water in Lake Athabasca. I believe you would agree with that?

MR. FINLAND: Yes, sir.

MR. FEEHAN: Now, particular reference is made to the low water at the estuary of the Athabasca River.

MR. FINLAND: Yes.

MR. FEEHAN: Is it not true that the major water hazard, low water hazard is after you pass the estuary and get into Lake Athabasca on the way to Fort Chipewyan?

MR. FINLAND: No, I do not think so,



in fact I know. I have freighted in there in low water and that is why I emphasize the importance of getting freight across there. In my organisation alone I handle 12,000 tons and that is a small thing compared to what they do today. It is back where the river goes into the lake. In other words, the river -- whatever the lake level is it goes up the river and that is either in your favour or is a troublemaker.

MR. FEEHAN: So the trouble in low water is not only in the estuary but in the trip from the estuary to Fort Chipewyan?

MR. FINLAND: There is shallow water across there and the estuary goes well out into the lake. That is caused by the river slowing up as it gets into the lake and it takes the sediment which goes out well into the lake.

MR. FEEHAN: We had information yesterday that the Peace River power project was not quite a certainty but at least was a likelihood. Now, in the event that that is so do you feel it would result in a lessening of the water in the Peace River as well as north Lake Athabasca?

MR. FINLAND: You mean if they go ahead to dam the Peace would it lessen the water in the Peace?

MR. FEEHAN: Yes.



MR. FINLAND: Obviously they are going to take a big part of the flow depending on how high they go with the dam. They do not know as yet how high they will go but there is talk of something of four hundred to six hundred feet and that would create a tremendous lake and it is probably on the big one they are thinking of the possible seven years to fill it up. That would take all the upstream flow of the river and it would eliminate the flood danger for several springs.

MR. FEEHAN: You feel if that were the case it would be virtually impossible to barge to Uranium.

MR. FINLAND: I did not say that, I said that would accentuate the low water conditions. They have had several seasons without low water but the changing water, the snow conditions in the mountains, low water does occur and under present operating conditions on high freight shipments it is virtually impossible to handle the growing volume of freight under those low water conditions without some alternative route. Mr. Taylor pointed out this morning it was for that reason they went ahead and spent \$100,000 or so clearing and locating a winter road north west from McMurray to the south shore of Lake Athabasca. That was one of the main reasons



they did that, it would be an emergency route if there should be low water and there was any sizeable tonnage left over at Waterways.

THE CHAIRMAN: Is that north west or north east?

MR. FINLAND: That was on the east side of the river to Lake Athabasca. That was the case practically every year during construction and even since under operating conditions sizeable tonnages are left at the end of the season and in the past they have had to fly out. The winter road was put in hoping it would offer cheaper operation.

THE CHAIRMAN: Only in emergency.

MR. FINLAND: Yes, but there is some routine freight that goes into Uranium City the merchants tell me, it may be anything from half a million dollars in value they would take in.

MR. FEEHAN: The point I was trying to make is this: In all likelihood the Peace River project will be proceeded with and the water will be used to fill a reservoir up river.

MR. FINLAND: Yes.

MR. FEEHAN: And in any event there is going to be a shortage of water in both Lake Athabasca and the Peace River. Now, if the railway went to Peace Point it would still have to be barged to Uranium, at least Uranium City, you would



still have to barge down the Peace River.

MR. FINLAND: Yes.

MR. FEEHAN: And there are one hundred thousand tons that would have to go from Peace Point to Uranium City?

MR. FINLAND: Yes.

MR. FEEHAN: Why would ^{it} be an assistance to barge through Peace Point in low water rather than through McMurray in low water?

MR. FINLAND: I do not know about that particular channel ever being impeded by low water. In other words, they are deeper channels and better maintained by the flow of water. Transportation, as far as I know, has not suffered through that channel by low water.

MR. FEEHAN: I was under the impression that the trouble was encountered at the extreme south east end of Lake Athabasca?

MR. FINLAND: That is right.

MR. FEEHAN: You feel they could be barging down the Peace River and into the Lake with no trouble?

MR. FINLAND: I think so.

MR. FEEHAN: You mention also in your brief a reference to a copper nickel discovery in the pre-Cambrian Shield. Have you any more facts about that?



MR. FINLAND: It is east of the river about 100 miles straight north of Smith and it was important enough that they staked several hundred claims on it. They have done some diamond drilling and from the indications it may be a sizeable deposit but there is no information as to whether the grade looks like a commercial proposition at the moment. I mentioned it casually to indicate that discoveries are being made and even though that particular one is not labelled as a mine at the moment it indicates the possibilities of that area. There have been many other discoveries made in that area, lead zinc, uranium to the east and copper closer to Great Slave Lake so the potential is there. As yet the whole area has not been prospected in detail. It is shortly going to be more intensely surveyed both by prospecting and geophysical means. I think before this Commission concludes its report it will probably read in the press and have reports from departments at Ottawa where they have a large scale program under consideration for geophysical work that would include this very area.

THE CHAIRMAN: From what department?

MR. FINLAND: The Department of Mines.

THE CHAIRMAN: The Department of Mines at Ottawa is planning a geophysical survey of this area?



MR. FINLAND: It could be treated that way. I think it will be released at the first of next week in Regina. This will be even south of Lake Athabasca along the Precambrian Shield contact and will no doubt be included in the geophysical survey by airborne instruments as well as on inland territories.

MR. FOUKS: Mr. Chairman, could I have the reference to that again? The Department of Northern Affairs, the Department of Mines?

MR. FINLAND: I think it will be the Department of Mines. This is a premature comment but, as I mentioned before, before this Commission concludes it will probably have full information on it.

COMMISSIONER THOMPSON: May I get a bit of information on that? Which company is involved in the copper nickel?

MR. FINLAND: Snowdrift Mines Limited, W.W. Moffat.

MR. FEEHAN: At the present time is there any available information whatever on this copper nickel discovery?

MR. FINLAND: Well, not that I know of. It could possibly be available from the controlling company but whether they would release it or not I do not know.

MR. FEEHAN: And there are no statistics



as to the ore body or the quality of the mineral itself?

MR. FINLAND: No, no information at all. At the moment it just indicates that discoveries are being made and the area is a potential mineral producer. Probably bears out the information that is accepted without reservations throughout mining circles anywhere, but probably for non-mining people it should substantiate that possibility.

MR. FEEHAN: The unfortunate part of it is that it is merely hearsay and there are apparently no methods of getting information at all whatsoever on the thing and that matter, I suppose, must be treated as speculation.

MR. FINLAND: I think there is a discovery there. You go to Yellowknife and find the claims have been staked and there may be information there as to preliminary assays. I do not think you would have any trouble substantiating that discovery has been made. As to its economic qualities the company may not want to release that information at the moment. It would probably not be available. They have not put it in the press yet in any case. As a matter of fact, the discovery is mentioned in a release from the geological survey as of the first of the year so that much has been in the press.



MR. FEEHAN: Now, in the event that the railway proceeded as far north as Peace Point on the eastern route I imagine that it would be fair to say that the barging would take place from Peace Point to Uranium City.

MR. FINLAND: That would be my guess that it would change the pattern of shipping from the Athabasca to the Peace River.

MR. FEEHAN: Do you know what the freight rates are now by rail from Edmonton to McMurray?

MR. FINLAND: Well, before you develop that question I would suggest that while the freight rates might be higher the service, the long service for the season over low water would give it some advantage. It might even mean a winter service over the ice. There are a lot of ramifications to it particularly in the tremendous capital that is required to put in a 12 month's stock of supplies at all these mines, the interest charges on the capital, the loss in shrinkage on a good many products where one is half water anyway and the other half probably goes bad. When you deduct the freight rate for losses and the interest on your capital it would be a great saving to be able to put these things in on a monthly basis even if they go through a more central railway terminal.

(Page 242 follows)



MR. FEEHAN: You feel that it would be reasonable to fly goods to Uranium City from Peace Point rather than to barge them?

MR. FINLAND: Well, it is not a matter of an alternative; it is the time of the year and considering other factors. The general gist of my feeling is that it is improving the transportation facilities, and if it is an improvement it is bound to lead to better conditions at the mines and better operating costs. That, I think, will be brought out from letters that you will have from the mining people operating in that area.

MR. FEEHAN: Could you give us some idea of the barge miles between Waterways and Uranium City?

MR. FINLAND: It is around 250 straight across. It is something in the neighbourhood of 325; something like that. I am just guessing.

MR. FEEHAN: What would be the barge miles from Peace Point to Uranium City?

MR. FINLAND: I don't know. You probably have it there. I would have to scale it off a map like you have there. It would look from that map like about 150, 160 miles.

MR. FEEHAN: And do you feel that the water rates would be cut down?

MR. FINLAND: It is a shorter distance. There would certainly be some compensation on the



water rate, yes; and if the speed at which they would operate was also improved, they would also be in favour of lower rates.

THE CHAIRMAN: The barge miles between Waterways and Uranium City you estimate at 325?

MR. FINLAND: Yes. It is 250 straight across, so it would be around 325. I believe it is around 125 miles from Uranium City to Chipewyan, and it looks like another 45 miles in the river there.

MR. FEEHAN: Mr. Finland, in the event that the railway did take the east route and the barging operations commenced at Peace Point rather than at McMurray, it would be fair to say that, in all probability, Northern Transportation would cease their operations at McMurray altogether?

MR. FINLAND: I think that would be a development.

MR. FEEHAN: And in the event that Northern Transportation did cease their operations from Waterways and McMurray, what would happen to those two towns?

MR. FINLAND: Well, there are many possibilities. They are just south of the oil activity. The thought is that the bridge across the Athabasca would have highway facilities and it would allow transportation from McMurray north, McMurray and Waterways. I think it is



one of those things that changes the pattern, but it adds to the overall development and results in a growth right across the picture. I don't think they would be hurt. In fact, I think their outlook would be the better.

MR. FEEHAN: Other than the copper, nickel discoveries we have been talking about, the gypsum, the salt and the tar-sands, do you know of any other minerals in or near the proposed eastern route?

MR. FINLAND: There have been many showings, not necessarily showings which will result in mines, but there is this company with property up further northeast, other companies have drilled mineral showings, particularly red zinc in Copper Lake. If one property happens to be dud and not developed into a mine, it does not write off the whole area; it may lead to other discoveries which are more economic.

MR. FEEHAN: Referring to page 3 of your brief, you mention that a further 100,000 tons of mine freight for the Uranium City area is considered to be potential traffic for this railroad. Now, if my understanding is correct, there are approximately 100,000 tons per annum barged into Uranium City.

MR. FINLAND: That is the freight I am referring to. That is further to this build-up



of freight.

MR. FEEHAN: And in the event that federal contracts for uranium were to terminate in the next few years, this would go by the board?

MR. FINLAND: I think you are speculating beyond any current range of thinking when you say that. The last two mines to be affected by reduced markets are the two in Uranium City. I don't think there is any thinking in the mining in Canada today that those two mines will close. These will be the last two, and it is estimated that others in the east will continue through the lower production period at lower prices. But the present thinking, that is by people in the control positions of uranium and atomic energy, is that those two mines will continue throughout that period.

MR. FEEHAN: I have no doubt that they will continue to operate, but is it not true that the major shipping for construction purposes of those mines has now been concluded?

MR. FINLAND: It was concluded prior to this year. Now, I think there was very little construction freight went out last year. So current figures are on a production basis.

MR. FEEHAN: Referring to the next paragraph of your brief, you say that mine and general freight for Yellowknife and points along the Mackenzie and the far north amounts to



100,000 tons. That, of course, would be true ?

MR. FINLAND: Beyond the south the freight would likely go either way. There may be some limitations. If it went on the western route -- it might be a little harder to try that freight on the western route. The freight rates would be a further consideration. My guess is that all that freight would be available to the railway on the western route. But I did not include that in the figures I gave you there.

MR. FEEHAN: I don't understand why that is true.

MR. FINLAND: You would still have complete water facilities operating. Any freight would still be available in the western route, but there is a possibility of changing pattern in the eastern route with the southern terminus moving north. It wouldn't apply in the western route.

MR. FEEHAN: I imagine that the highway would have the same result on the eastern route?

MR. FINLAND: The present Mackenzie highway?

MR. FEEHAN: Yes.

MR. FINLAND: Yes. They ship a lot, they handle a lot of freight there now.

MR. FEEHAN: Reference is made in your brief on page 5 to the McGregor Report. I think



it would be fair to say that the McGregor Report was -- the Commission itself was called to report on only one phase of Canada, and that is Northern Alberta; is that correct?

MR. FINLAND: No, that is not correct. They visited Uranium City and they visited Yellowknife, but being a political entity they couldn't say that they were looking out.

MR. FEEHAN: But it would be fair to say that the recommendation was based on the economic entity of Alberta?

MR. FINLAND: To some extent, plus the fact that they had to contend with the official government opinion of Alberta. This is in face of the government.

MR. FEEHAN: The present Commission being a national commission?

MR. FINLAND: Yes. They took a look at north Alberta, of course, but you can't take it out of the picture, and that includes northwestern Saskatchewan. The Commission did visit these other points just to learn what they were doing. But this maintains in spite of the opinion you heard here just before noon.

MR. FEEHAN: I have been asked if you would explain that last statement and, if at all possible, to give us the authority by which it is made.



MR. FINLAND: Which is that?

MR. FOUKS: The position of the Province of Alberta is ---

MR. FINLAND: It says in the McGregor Report. There it is. Mr. Taylor was submitting a brief advocating the Grimshaw route, wasn't he?

MR. FOUKS: That is so.

MR. FINLAND: Well, it is as simple as that.

MR. FOUKS: Mr. Chairman, with deference to Mr. Finland, I think that the witness should be told that some of these questions are directed because of us and not himself.

MR. FEEHAN: I would like to make my position clear or to ask you what my position is. I am directing any questions which any person asks me to direct, and I am trying to direct them in a reasonable way. I wonder if that is proper on my part.

THE CHAIRMAN: Well, we are anxious to get all the facts we can.

MR. FINLAND: Well, I asked the learned counsel whether or not he was acting for Premier Bennett. We are here to be helpful, but with limitations, unless they apply.

MR. FEEHAN: I must say that I have received the same complaint from the other side, and I am prepared to accept it as such.



The question that I am directed to ask you now is whether or not ---

THE CHAIRMAN: I think you are entitled to assume that you are acting for those people who are advocating the western route and you are entitled to ask those questions, testing the opinion of those in favour of the eastern route. However sincere opinions may be, people are liable to err.

MR. FEEHAN: The question that I am directed to ask you now is -- first of all, I refer you to various phrases used in the brief such as "they pointed out" in the first paragraph of page 2, and "it is estimated" in the last paragraph of page 2, and throughout the brief those phrases are used.

MR. FINLAND: Well, let's take them one at a time and see if I can recapture the inspiration.

MR. FEEHAN: Shall we refer to the first paragraph on page 2? "They pointed out that this minimum tonnage . . .", etc.

MR. FINLAND: "They" refers to the railway companies.

MR. FOUKS: Mr. Chairman, that is my pointed question. Actually what I am looking for is a direct reference to which I can apply my thinking, finding out the accuracy or inaccuracy and who they may be. "They pointed out the



minimum tonnage . . ." -- "they" meaning the railroad is still too ambiguous.

THE CHAIRMAN: Don't you think that Mr. Finland has expressed a lot of opinions, as everybody else has, but there are still some things that we will ask the railroad companies about. If Mr. Finland should be in error with regard to that, I think we can find that out from the railways, can't we?

MR. FOUKS: Yes, provided the information he received came from the railways or the Minister of Mines.

THE CHAIRMAN: I think we will pay more attention to what the railway says about that.

MR. FOUKS: It is possible there may be a conflict.

THE CHAIRMAN: When you say "They pointed out", that is the railway companies pointed out?

MR. FINLAND: There are two railways involved here, the Canadian National and the C.P.R., and it obviously refers to them. I think the Chamber of Commerce brief will go through that phase in some detail, as well as some of the others I was questioned on this morning.

THE CHAIRMAN: The railway companies are combining in their brief, so we will hear from



both of them, and I think we may be able to find it out from them.

MR. FOUKS: I am satisfied with that, sir.

MR. FEEHAN: I have no further questions, unless Mr. Baldwin has some.

Mr. Baldwin has asked me to ask you, Mr. Finland, with reference to the mention of gypsum this morning, do you advocate or contemplate the opening of Wood Buffalo National Park to mining?

MR. FINLAND: Well, I obviously can't answer that. It is hoped that the government may be prevailed upon to change the name of that area from that particular type of park that is reserved and give it some type of animal reserve which would allow prospecting to go on, particularly along the eastern boundary. They might even change the boundaries. This question has been presented to the federal government, and I think it will be pursued until we get an economic answer to the mineral potential of the area.

THE CHAIRMAN: Mr. Thompson would like to ask some questions.

COMMISSIONER THOMPSON: How much difference did you say there would be in barging from Peace Point to Bushell as against, say, barging from Waterways to Bushell?

MR. FINLAND: I thought it would be about half the distance, roughly.



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Finland

252

COMMISSIONER THOMPSON: That is what I thought; it is only 48 miles difference.

MR. FINLAND: Yes.

COMMISSIONER THOMPSON: It is 204 from Peace Point as against 252 from Waterways, because of the terrific loops on the Peace.



COMMISSIONER GAINER: I have always been curious about a suggestion which I have seen expressed that, at some point, everything would be moved down to Peace Point. Even from the water transportation point of view I would think that that would be very unlikely, that that huge investment in Waterways would be moved anywhere. Given the low water and so on the Athabasca I can't see how this move would -- would you think there would be any great diminution in the cost of moving freight?

MR. FINLAND: There are nebulous factors there, and the shippers may have some basis there in the trends that probably are being foreseen at this time. I didn't mean to imply that it would be done immediately. There will probably be a long-term trend, and it would depend on what would happen.

MR. GAINER: Would you care to express the thinking you have heard on this subject in mining circles?

MR. FINLAND: I don't think I have gone into it. I have talked it over with freighting people themselves, and unofficially they have suggested that if there is going to be a railroad that is where it should be and they would be there to meet the change economically.

COMMISSIONER GAINER: They would be there voluntarily?



MR. FINLAND: They would accept progress as it comes along. That is what it amounts to -- go along with it.

COMMISSIONER GAINER: But are you suggesting that they would move it if it was part of a general plan?

MR. FINLAND: I don't think they went that far. They would have to wait and see what the trend was and how it developed.

COMMISSIONER GAINER: And in what respect did they seem to think this would be a logical move?

MR. FINLAND: Well, assuming that we are going to have a railroad they felt that that was the route it should follow and, if it is built, why, they have to live with it.

COMMISSIONER GAINER: You are not speaking of water transportation?

MR. FINLAND: Water transportation.

THE CHAIRMAN: I have a few things to ask. You mentioned low water. How often has it occurred in the last twenty-five years, do you know?

MR. FINLAND: I haven't kept a record of it. Twice, apparently. They mentioned one in recent years and I had low water in 1938.

THE CHAIRMAN: Low water in 1938; and 1954 has been mentioned, hasn't it?

MR. FINLAND: Yes. The thing is that



it would be a much more serious proposition now, and it wouldn't be good planning or sensible operation, to sit by and wait for it when the odds are against you.

THE CHAIRMAN: The evidence given yesterday sounded to the contrary. It sounded as though, perhaps, there might be a few short intervals of low water, but it sounded as though, perhaps, the dam would give us a controlled river which would then keep floods down but make more water available and, consequently, prevent low water conditions.

MR. FINLAND: Well, that is a possibility. Dredging has been tried on the silt coming down, but that is a continuing, expensive thing. Low water usually comes about late in the season. Of course, they may try to beat it with more equipment. It depends on a lot of elements. But the serious low water would still be a very serious deterrent, particularly with these large volumes of freight moving on the water, and with every indication that they are going to grow over the next ten or twenty years.

THE CHAIRMAN: Mr. Finland, it has never been suggested that low water is not a serious matter, but the suggestion is advanced that there would be less low water if the river was controlled in these critical periods.



MR. FINLAND: I don't think so. It is going to be a long way in the future with that; and I would consider that you would still have very serious low water. I don't think it would eliminate it by any means.

THE CHAIRMAN: The low water condition occurs when?

MR. FINLAND: The late shipping season.

THE CHAIRMAN: August and September?

MR. FINLAND: Well, September -- late August and September, yes.

THE CHAIRMAN: This was a suggestion put forward yesterday in evidence -- I have kept careful note and I haven't seen the transcript yet -- as I understood the evidence of Mr. Shakespeare it was that as this dam is being built there will be a period of some seven years before the lake is filled with water. That is a period that does cause you some anxiety, doesn't it?

MR. FINLAND: Yes.

THE CHAIRMAN: But whenever they wanted to release some water, even during the early stages of construction, they could do that; so that he felt that the times when they would be taking water from the Peace River would be the times when the Peace River would be flooding and when there was more water going down the Peace River than was needed; but, on the contrary, if the



Peace River got a bit low they would be in a position to supplement the natural flow and build it up so that there would not be low water. What do you say to that?

MR. FINLAND: There are two things there. One is whether the power people would be ready to release water when the shipping people wanted it; and, another, if you are going to lower the whole level of water. Those sand bars at the mouth of the Athabasca build up, and I couldn't venture -- I would be just guessing at what might happen there. These rivers are relentless in dropping their silt as they slow up, and they could possibly reach the level of the sand bars there. I don't know. I wouldn't just glibly say that the dam on the Peace River is going to be as far-reaching or as magnanimous to the interests of the eastern area.

COMMISSIONER GAINER: Could I ask a question here? We have been talking about control of the Peace River. I suppose it would depend in large measure on the extent to which Peace River waters contribute to the Lake Athabasca waters, which would only be in the spring; is that right?

MR. FINLAND: My feeling is that I am wondering what we would do to the level of Lake Athabasca.



When the Peace is in flood it raises Athabasca. In considering this we must consider flood conditions on the Peace. Then, again, they don't occur every year; and I can see you might have a general lowering of the level of Lake Athabasca rather than any tendency to raise it.

You could develop Mr. Shakespeare's theme and maybe work out a painful picture that it would act to the detriment of shipping on Athabasca. I think he has got a fanciful theme and is a long way from his proposition of creating a power plant.

COMMISSIONER GAINER: Suppose we worked on the assumption that the mean volume of water was not affected on the Peace but merely stabilized. It might happen that you wouldn't get the spring-back flood. Does the spring back flood affect the level of Lake Athabasca itself perceptibly, or does it merely flood the delta?

MR. FINLAND: When the Peace River is really in flood it will raise Lake Athabasca for 200 miles of lake as much as 10 or 12 feet.

THE CHAIRMAN: How deep is Lake Athabasca?

MR. FINLAND: You have got very extended shallow water on the south shore into Black Bay. I haven't the sounding. Several hundred feet, I would say, in Black Bay. That is on the north central shore; and on the south shore you have the flats out into the lake and you have got the



mud flat in the delta.

THE CHAIRMAN: Could you give us the average depth?

MR. FINLAND: I couldn't, in the area involved. An average depth wouldn't mean anything. You may recall the geological structure of Black Bay. There is obviously a fault on the lakeshore in that area. It is very deep. There are spots in there I know it is 75 feet, because tractor drivers have gone down through the ice and have, providentially, come up through the same hole and they have been able to measure the depth as they had to go down to get the tractor anyway! But there are some very deep areas in Black Bay and it is virtually unaffected by the movement of silt.

COMMISSIONER GAINER: What I am trying to get at is the effect on shipping in the Athabasca delta, which is a bottleneck, I believe, due to spring back flooding, and I believe, even though it affected the lake level perceptibly, it would be a temporary situation; it would run out about as fast over the next few weeks as soon as the flow is reversed.

MR. FINLAND: Well, as the level of the lake is increased your lake goes up river that much further.

COMMISSIONER GAINER: Up the Athabasca?



MR. FINLAND: As the river water drops its load so that this deposition would be up river, and possibly in the course of a year or two it would change the level of the water and it would eventually carry it through . . .

COMMISSIONER GAINER: Supposing there were no spring back floods on the Peace, so that you didn't get the spring variation even in the level of Athabasca. Would that have any effect on river levels in the Athabasca delta in the fall of the year?

MR. FINLAND: Yes, it would. If the lake is to maintain a steady level -- at least, as a result of the rivers at the east and west end flooding into it -- the level of water in the delta would depend entirely on this flood in the Athabasca, and that could be even more serious.

COMMISSIONER GAINER: And that would be in the fall?

MR. FINLAND: Yes, in the fall they do have lower water trouble up the river at McMurray, but they are bad at the delta.

COMMISSIONER GAINER: Have you any further comment to make on the point we were discussing the other day on the prospect of enriched as against natural uranium for marketing purposes?

MR. FINLAND: No, I don't. I can only take my impressions from reports published by the



heads of prominent companies, and at the moment they do see a sag after 1962 and '63 and a changing pattern of demand towards 1970; and so far as I know there is nothing to change that picture either in the lesser use of uranium, or maybe developments of atomic energy may come along faster and the demand may increase, or, rather, it may increase earlier than present estimates indicate.

COMMISSIONER GAINER: That is all.

THE CHAIRMAN: On one occasion you were referring to the copper-nickel, and I think you said there had been many other discoveries in this area. You also said that the opinion of mining men generally was that the area east of the Athabasca is favourable for the discovery ...

MR. FINLAND: Yes.

THE CHAIRMAN: . . . of many such things. What are they, do you know?

MR. FINLAND: Regarding the discoveries that have been made, they have diamoned drilled it in the years past...

THE CHAIRMAN: Can you tell us more of these discoveries there?

MR. FINLAND: Well, I can recall that American Yellowknife had one on O'Connor Lake years ago.

THE CHAIRMAN: You said that was lead-zinc, didn't you?



MR. FINLAND: Yes; that was lead-zinc. There was a lot of activity carried on there trying to develop uranium in that area a few years ago -- in the past ten years -- when uranium exploration was more active; and with greater demand for uranium what has been found suggests a very good possibility that uranium could be produced in the area, possibly at current prices, if there was a greater demand, or less production with more favourable transportation.

THE CHAIRMAN: Now, I think you commented on the fact that opinion amongst mining men generally is to the effect that the area is favourable for the occurrence of ore?

MR. FINLAND: Yes. This is a segment of the Precambrian area and I am sure you are well aware that it is considered very favourable; and potential production has given throughout eastern a tremendous account of itself /Canada, and in areas where it has been more thoroughly prospected.

Again, at the east end of Lake Athabasca, there are substantial nickel showings, although nothing economic yet.

There is high-grade gold in the area. There is iron . . .

THE CHAIRMAN: I would like to make a note of these things. At the east end of Lake



Athabasca there is nickel?

MR. FINLAND: Nickel.

THE CHAIRMAN: And iron at the east end of Lake Athabasca?

MR. FINLAND: Yes; there is a property of some significance there right now.

THE CHAIRMAN: Can you describe that to us?

MR. FINLAND: No, I can't tell you anything about it; but I know George Radisics of Toronto is interested in that. I think Noranda has looked at it and others. It is sizeable enough that the big fellows are looking at it.

THE CHAIRMAN: What was the other that you mentioned?

MR. FINLAND: And gold; there are some high-grade gold showings down there and further exploration could easily make the picture much better.

But that is just on the fringe of the lake, and obviously the great areas to the north and northwest of that whole lake would be served from the railroad; but the area between the two lakes would have to have a direct line. The area just hasn't been prospected thoroughly by any means yet.

THE CHAIRMAN: And you say it is part of the Precambrian Shield?



MR. FINLAND: Yes.

THE CHAIRMAN: This is a segment of the Precambrian Shield. Is there any other reason for suggesting that it is favourable for ore bodies? I am not suggesting there should be any other reason, but is there any?

MR. FINLAND: Well, the area has had a little mapping. There are some parts where detailed work has gone on and favourable structures have been found such as has been adequately proved by the uranium deposits which are the most economic in Canada; and probably that is true within this whole territory; and these other discoveries are close to being economic. So that opinion is pretty well borne out by fact.

THE CHAIRMAN: Would you mind having a look at this map? Perhaps it would be better if you come up here. What is the distance, McMurray to Uranium City and Peace Point?

MR. FINLAND: That is about 17 inches at 12 miles to the inch. In fact, measuring the actual distance in the barge haul between McMurray and Fort Bushell, and from Peace Point, which would probably be the termination of the railway, to Fort Bushell -- I don't know, but it looks as though the one was twice as long as the other, and actually there is only 48 barge miles between the two points.



THE CHAIRMAN: McMurray is 48 miles further?

MR. FINLAND: Yes. It looks as if it would be twice that far.



MR. FINLAND: I do not think it is quite solved. There is a further consideration when Mr. Thompson is building docks at Peace Point I have not any idea but there is a likelihood they would be built down the river and served from a spur line. That indicates the same mileage of the railroad but but could quite easily go off for 50 or 60 miles of the river. It would keep it within the 100 miles but change it somewhat from what the casual figures would indicate.

MR. BALDWIN: You mean there would be a railway spur down river?

THE CHAIRMAN: Yes, would you mind explaining that, please?

MR. FINLAND: Well, the river is very winding and I know there is good navigation up the Peace part way where they are already hauling lumber. Whether good water goes up to Peace Point, I don't know and it would be a question of survey if anyone did the surveys on barges as to where they will build their wharfs. The likelihood is it would require a short spur and perhaps one that would go down the river a ways and circumnavigate that series of bends in the Peace River.

THE CHAIRMAN: You suggest that a spur



might cut out some of the river?

MR. FINLAND: Yes, it may take some 50 miles off the water haul.

THE CHAIRMAN: Anything else?

COMMISSIONER THOMPSON: No, I think not.

MR. FEEHAN: Mr. Chairman I was going to ask if Mr. Finland could comment on the degree of metamorphism that has taken place in the pre-Cambrian area between the Great Slave area and Lake Athabasca.

MR. FINLAND: Well, there is a great variety and some places metamorphism is more serious than others. There are a good many areas where you would hit good fresh rock not too far -- could you give me an inkling of what you are thinking of?

MR. FEEHAN: I heard that the whole area is fairly highly metamorphised and therefore the indication would be that it would be unlikely that any large ore body would be found in that area. I was wondering about your opinion in regard to that matter.

MR. FINLAND: Well, metamorphism has no direct bearing on mineral deposition. You can have the best mine in the world, any metal, in a changed rock. For the major part of that



area it is a good deal of igneous rocks. What the geologists look for is structure where the old consolidated earth mass has been shattered and the conditions have been such that these minerals come through any general volcanic area, continue the geologic action. It does require that the surface be fractured and eliminate metamorphised rocks or sediments. In fact, if I can convince you that the area around Uranium City is in some very seriously altered sediments, they are so badly altered -- normally the difference between a sediment and granite would be the difference between a building and a small garage but their sediments have been metamorphised to a point where they look like granite and were called granite. In fact, they called the boat on Lake Athabasca the Porfery. They are changed sediments so whoever was giving you that information is just giving you the wrong lead.

THE CHAIRMAN: I want to make sure whether this is accurate. I believe that you said that metamorphism has no bearing on deposition of minerals?

MR. FINLAND: No directive bearing.

THE CHAIRMAN: It is the intrusion of igneous rocks that produce ore?

MR. FINLAND: Mainly.



THE CHAIRMAN: Mainly, yes. Geologists look for structures. Now, for instance, uranium is found in seriously altered sediments or so seriously altered they appear to be granite.

MR. FINLAND: And the reason they are there is because of the tremendous fractures that occur in the original consolidated crust. That is what the geologists refer to as structure.

THE CHAIRMAN: Could it be that other rocks that appear to be granite in that area are really sediments that have been altered.

MR. FINLAND: I would not say so on a very large scale. I recall having some experiences in old pre-Cambrian rocks that are altered sediments and in diamond drilling it looks like granite but it could be anything. In fact, the term at Yellowknife when they developed the hot sediments, they look like igneous rocks which are hot rocks and the term "hot sediments" was given.

THE CHAIRMAN: Thank you, Mr. Finland. I hope you will tell your President that we are grateful for your assistance here today.

MR. FINLAND: Thank you, sir. I was happy to have been here and certainly hope that we have been of some assistance.



CANADIAN KODIAK REFINERIES LTD

Appearances:

Mr. Jack Moar	General Manager
Mr. Archie Gordon	Traffic Manager

THE CHAIRMAN: Mr. Moar, will you
just go on with your brief?

MR. MOAR: Thank you, Mr. Chairman.

We maintain that the economy of
Canada can best be served by the construction of
a railway starting at Waterways and skirting the
western edge of the pre-Cambrian Shield to a
terminus on the south shore of Great Slave Lake.

The natural resources to be tapped by
such a railway in comparison to a railway running
north from Grimshaw to Great Slave Lake are listed
below:

1. The Athabasca tar sands (these sands
contain several times the other known oil re-
sources of the world.)

If and when we in North America are
denied the oil supplies of the middle east a rail-
way to tap these oil sands is almost a must if we
are going to survive.

2. The pulpwood and saw timber of the



Athabasca and the Clearwater drainage basins will give employment to thousands of men in these primary industries. Secondary industries such as paper mills, kraft mills, board mills, etc. will give employment to additional thousands.

3. The gypsum deposits at Peace Point on the banks of the Peace River only require the coming of a railway to make them a tremendous asset in the economy of Western Canada.

4. The hydro power to be developed on the Slave River at Fort Smith is required now to power the mines on the north shore of Lake Athabasca and more power will be needed when Pine Point is brought into production which we understand is one of the principal reasons for building this northern railroad.

5. The uranium mines on the north shore of Lake Athabasca provide a ready made tonnage of freight that exists today. This would provide a basic freight load which would go a long way towards meeting the volume needed to make the first 150 miles a paying proposition. There are as many people living in the settlements of Uranium City and Fort Smith as there are along the Mackenzie highway between Grimshaw and Great Slave Lake.

6. The operating mines at Yellowknife and on the east arm of Great Slave Lake are only a



few of the known mineral deposits that would become commercial ore deposits if a railway skirted the western edge of the Precambrian Shield. Branch lines to these deposits such as the ones at O'Connor Lake and Snowdrift would generate many thousands of tons of freight to be moved on the main line railway. No such opportunity exists on the line north from Grimshaw.

7. We have had about seven years of above-normal water on the Athabasca River. A drop in this river's level below normal would leave thousands of tons of freight stranded on sand bars in the Athabasca River. The loss of these supplies could cripple the mines and settlements of Uranium City and Fort Smith even in their present scale of development. If these mines and settlements are not to be hamstrung by inadequate transportation facilities in the future a railway to serve them should be started north from Waterways immediately.

8. The farm country north of Grimshaw has an already established highway system. If it is not considered adequate to serve the agricultural population it can and should be made adequate. It is a well known fact that other than for grain haulage agricultural communities can best be served by good highways.

9. A railroad north from Waterways would



open up a new agricultural area northwest of Waterways and two new ranching areas further north, one on the delta of the Athabasca and the other on the delta of the Slave.

10. Ore shipments from Pine Point would be 20 miles closer to Trail, B. C. and Fort Saskatchewan, Alberta via Waterways than by the Grimshaw route.

11. We understand the gradients on the eastern route would be easier than on the present grade climbing up out of the Peace River Valley to Grimshaw.

As a bush pilot I have flown, walked and driven over many thousands of square miles of the area to be served by either of these proposed lines since coming to Edmonton to live twenty-one years ago and it is my considered opinion and that of my company that the building of a railway north from Waterways will have many times the impact on the development of Northern Canada that a railway built north from Grimshaw would have.

THE CHAIRMAN: I would like to ask you one or two questions which may lead to something further after a short adjournment. You speak of "the Pulpwood and saw timber of the Athabasca and the Clearwater drainage basins -- ". How would it affect the timber in Clearwater?

MR. MOAR: You would have to have



enough pulpwood behind you on reserve for any pulp mill and if the railroad is built along the eastern route the logical place for it would be down river somewhere near Embro where you would have all the timber along the Athabasca as well as the timber on Clearwater.

THE CHAIRMAN: Now, you mention the development of hydro power at Fort Smith.

MR. MOAR: Yes.

THE CHAIRMAN: Will a railroad make much difference to whether hydro power is developed there or not? For instance, does hydro power up in the far north --?

MR. MOAR: It is very expensive and has to be amortized over a period of years and so it is addressed to the cost of power and power is one of the things that that country has to sell.

THE CHAIRMAN: Well, is the railroad much help in getting a power plant established?

MR. MOAR: Oh, yes.

THE CHAIRMAN: And then, is it much help in keeping it going?

MR. MOAR: No, no help in keeping it going.

THE CHAIRMAN: It is getting it established?



MR. MOAR: Getting it established,
that is right.

COMMISSIONER GAINER: You mean con-
structing it?

MR. MOAR: Yes.

COMMISSIONER GAINER: But it would
not necessarily ensure a market for the power?

MR. MOAR: Not at all.

THE CHAIRMAN: But it would make it
a lot cheaper to get into operation?

MR. MOAR: Oh, yes.

THE CHAIRMAN: How much would a
power plant cost to get into operation at Fort
Smith?

MR. MOAR: Well, Mr. Berry held a
permit on the power site between Fort Fitz-
gerald and Fort Smith and there is one location
where it is very simple to cut through and
develop the power in stages. There is a place
that juts out into the stream and the water on
one side is roughly twenty feet higher than
it is on the downstream side. It would be
very simple to develop that in stages at
Fort Smith but it would be a very expensive
proposition. It is one of the major waterways
in the country and there is a tremendous amount
of water.



THE CHAIRMAN: The material could go down the river, could it not?

MR. MOAR: It could go downriver but it could only go down during the open water season which is only a few months in the summer-time.

COMMISSIONER GAINER: What kind of a reservoir would they have to envisage for this river if they were going to put in a power development? The banks in that country are so low.

MR. MOAR: That has all been investigated by three different people, the Calgary Power, Montreal Light and Power and the Dominion Government.

COMMISSIONER GAINER: Are there figures available, do you know?

MR. MOAR: I believe Consolidated Mining and Smelting also have investigated and they have their figures.

THE CHAIRMAN: The Calgary Power?

MR. MOAR: And Montreal Power which is the parent company of Calgary Power.

THE CHAIRMAN: And the Dominion Government?

MR. MOAR: And the Dominion Government.

COMMISSIONER GAINER: Have you



seen not the figures but the plan of these figures? They are available publicly, are they, or were these private studies that have not been made available?

MR. MOAR: I think they are just preliminary figures in each case and I think that the latest ones are Consolidated Mining and Smelting which was done a year ago and that is in connection with the power for Pine Point that they are interested in.

COMMISSIONER GAINER: You could probably get more details from them?

MR. MOAR: I think so, yes.

THE CHAIRMAN: You mention the agricultural prospects from the delta of the Athabasca and the delta of the Slave and the area north west of Waterways.

MR. MOAR: Yes.

THE CHAIRMAN: We heard something of that when we were at McMurray. The people there told us there is a lot of fine vegetable gardens up and down the river and apparently some good grazing prospects -- prospects for grazing are good, I should say.

MR. MOAR: Well, the fact that the wood buffalo range south into that grass-



land is pretty good evidence and they are there by the thousands when you are flying over in the winter and fall.

THE CHAIRMAN: Where is that?

MR. MOAR: Just south of the delta, on the Athabasca south of Lake Claire.

THE CHAIRMAN: That is south of the Wood Buffalo Park?

MR. MOAR: Yes.

THE CHAIRMAN: We are going to adjourn now until 3.30 and if there is anyone who would like to discuss with Mr. Feehan, Commission counsel, any questions to be put to Mr. Moar I am sure he will be glad to see you.

--- A short recess.

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Moar

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THE CHAIRMAN: Mr. Feehan, have you any questions that you would like to ask Mr. Moar?

MR. FEEHAN: A single question, sir, and it has been dealt with at an earlier time.

I just wanted to ask Mr. Moar, with reference to the second portion of paragraph 1, whether or not a spur line from McMurray north into the oil sands might not be just as good a solution to the oil sands problem as the construction of a railway right through to Pine Point.

MR. MOAR: Well, first you have got at least one and probably two bridges if you go north to the tar sands to develop the ones on the west shore which are your richest sections, and the short spur line would have to carry the cost of those two bridges. If you are going to build a bridge onto Pine Point it would be amortized over the cost of the whole line. Also the tar sands is a mining proposition, it is not a drilling deal, and it hasn't gone much past the pilot plant stage, and time is a factor in developing it and a railway would probably shorten the time interval between pilot plant stage and full production.

MR. FEEHAN: That is all I have to



ask, sir.

COMMISSIONER THOMPSON: On the same question, Mr. Moar, if they finally developed the Athabasca tar sands, wouldn't a pipeline be set up rather than a railroad?

MR. MOAR: If you are coming out overland; the pipeline is still the cheapest form of transportation over land, which is the same situation in north British Columbia and the Fort Nelson Field. The oil will come out by pipeline, but you can't take it in by pipeline, and since it is a mining proposition the railway is needed to take in the supplies. The oil coming out will come out by pipeline.

COMMISSIONER THOMPSON: Further on that point, as I understand it, the difficulty is that water navigation was down at the mouth of the river. Would a railroad be any cheaper if you had to build a bridge?

MR. MOAR: I don't think you could operate very successfully or very profitably just depending on water transportation for a few months to develop a large mining proposition. It would just be common sense to build a bridge, and if not a railroad a road. If you are going to transport freight, the cost of transferring it on and off barges for



such a short distance, a railroad would probably be built, if not a highway.

COMMISSIONER THOMPSON: I have just one more question. The last brief that we had suggested the development of a hydro plant up at Hudson Hope would be rather disadvantageous at the west end of the Great Slave Lake. Here you mention that hydro power is to be developed on the Slave River. I always understood it was impossible to develop power at Fort Smith on the rapids unless you had a controlled flow on the Peace River. So it required a controlled power flow on the Peace, and the last brief didn't seem to be very happy about this controlling of the Peace River. What are your ideas on that?

MR. MOAR: I think they should both be built, both power plants should be built, and probably will be built.

COMMISSIONER THOMPSON: Do you think we should develop power there? Even when it is disadvantageous to the west end of the river, you feel we should still go ahead with the power plants.

MR. MOAR: Yes.

COMMISSIONER THOMPSON: It would be sound economically.

THE CHAIRMAN: We will adjourn until

ROYAL COMMISSION
ON
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT
EDMONTON, ALBERTA

VOLUME No.: 5

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ROYAL COMMISSION ON
THE GREAT SLAVE LAKE RAILWAY

Hearings of the Royal Commission on
The Great Slave Lake Railway held
at Edmonton, Alberta, at the Court
House, at 10.00 a.m., September 15,
1959.

PRESENT:

MR. M. E. MANNING	Chairman
MR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMPSON	Member

MR. FRANCIS M. FEEHAN	Counsel
MR. A. PATERSON	Secretary



THE CHAIRMAN: Mr. Porritt, you have two briefs that you are going to submit this morning, haven't you?

MR. PORRITT: Yes.

THE CHAIRMAN: Before we go on to yours, would you mind if we just had a word about the brief which has been filed by the Fort Smith Chamber of Commerce?

MR. PORRITT: No.

THE CHAIRMAN: The reason I would like to refer to that is that Mr. Kaeser is here but he does not want to read the brief, and it has been sent to us to be placed on file for our consideration. We have read it, but we will consider it again. But as he prefers not to read it, we will just file it as an exhibit along with the other briefs.



SUBMISSION OF
THE FORT SMITH CHAMBER OF COMMERCE

We feel that the following information will be of assistance to the persons who are interested in the view of Fort Smith, N. W. T..

Fort Smith is the administration centre and capital of the Northwest Territories. It is situated on the south bank of the Great Slave River, at the 60th parallel of latitude, about 500 miles north of Edmonton, Alberta. During the summer months the Slave River forms an important link in the water traffic system between Waterways, Alberta (the end of the railroad) and all the communities in the valley of the Mackenzie River northward to the Beaufort Sea. Fort Smith is a transshipping point in this system. The town has grown since 1946 from about 250 to its present population of about 1,500 persons due mainly to the growth of its administration functions. It can be expected that the administration functions will grow and with the development of our northern resources, its role as a transport centre can be expected to increase in importance.

The Fort Smith Development Plan has sited areas for warehousing and service industries. At the present 300 surveyed and government-owned lots suitable for both single family and multiple family



dwelling are available. We have adequate water and sewer systems which can handle 5,000 people if necessary. Construction of a hydro plant on the rapids is being considered by the Government and if built will mean a great deal to Fort Smith and the surrounding districts. Two years ago a new \$3,000,000 federal school and hostel was completed and this can accommodate 500 pupils.

Present Transportation Facilities

Water: During the summer months, May 20th to August 21st, Northern Transportation Company (a crown-owned corporation) operates barges between Waterways, Alberta and Fort Fitzgerald, Alberta. The rapids upstream from Fort Smith, N.W.T., prevents continuous navigation and consequently supplies for Fort Smith have to be unloaded at Fort Fitzgerald and hauled by road transport to town, some fourteen miles. Supplies for the northern points also have to be transported by road to Bell Rock, nine miles from Fort Smith, and then again reloaded on barges.

Air: Pacific Western Airlines fly from Edmonton via McMurray daily except Sundays, a two and one-half hour flight. Rates are air express, 30 cents a pound; air freight, 11 cents a pound; outgoing air freight, 5½ cents a pound.

Trail: During the winter months the only road is the 185-mile winter trail to Hay River



connecting up with the Mackenzie highway. This is only usable for a two-month period at the very most, weather conditions permitting.

This, therefore, causes all heavy goods, machinery, lumber, building supplies, oil products, beer, etc., etc., to be brought in during the summer months and must be stored to the following June. The merchants have not sufficient capital as yet, to pay for the goods, warehouse charges, heating and insurance, etc., so they must borrow. In turn, the costs are passed on to the consumers.

Employment to a country is a must, to obtain natural security and to do away with government subsidy. To do this you must have transportation at a cost within the reach of everyone. In the Fort Smith area alone the lumbering, plywood and wood products industry would help relieve taxpayers of such a great burden. At the present time, in this area, there are about 250 men employed at lumbering. Shipping can only be carried out about four and one-half months of the year. A railroad would increase this. Employment in the wood product industry alone would increase to one or two thousand people directly employed, which would support at least another two or three thousand people.

Another reason for the necessity of a railroad in the Fort Smith area would be to provide



an easier and earlier access to the timber stands, thus avoiding natural destruction of these stands by the blight beetle, or as more commonly known, the tree killer. Reference being made to the great loss to the Canadian people of revenue, employment and industry through the vast destruction of the blight beetle in the area surrounding Golden in the Province of British Columbia. Persons directly connected with the lumbering industry in Fort Smith have observed early sign of this beetle in parts of Wood Buffalo National Park. The following wood products could be shipped yearly if transportation were available to the outside market.

Lumber -- approximately 100 million board feet annually

Plywood-- approximately 40 to 50 million feet annually

Pulpwood -- approximately 25 to 35 million feet annually.

The gypsum deposit in the Wood Buffalo National Park has been investigated by geologists and engineers. Fantastic tonnage of exceptional quality exists in the Gypsum Cliffs located at the Peace Point on the Peace River. It is estimated that a minimum of one billion tons will be available from this deposit. The quality is on a par or superior to any deposit in Canada, and most significant is the fact that this high quality gypsum is in layers 16 to 19 feet thick



without any intervening layers of impurity. Alberta currently is importing gypsum from Mexico for its industries. Development of gypsum will mean many jobs both at the mining and processing end. It is assumed that four to five hundred thousand tons of gypsum should be processed per year.

The goldeye fishery in Lake Claire, also in the park, is significant in that it is the largest commercial goldeye fishing operation in Canada, the annual catch being 250,000 pounds. At the present time the production has to be flown out to the market.

There is a professional abattoir also located in the park at which is conducted an annual buffalo slaughter. Annual production of 400,000 pounds of meat is processed for the market.

We fully support the Waterways - Pine Point - Fort Smith - Bell Rock route.



SUBMISSION OF
HAY RIVER CHAMBER OF COMMERCE

Appearances:

Mr. Robert Porritt

THE CHAIRMAN: Now, Mr. Porritt, which one would you like to deal with first?

MR. PORRITT: The Chamber of Commerce -- rather a short one.

Gentlemen, I appreciate the privilege of appearing before the Commission to present a short brief on behalf of the Chamber of Commerce and one on my own behalf. As a Canadian, I would like to mention that I have lived in the Northwest Territories for some years. In the case of the Hay River Chamber of Commerce, I will read this off; it is quite short.

It has been noted with great satisfaction that the promise of a rail line to the Great Slave Lake is to become a reality in the immediate future. We are in agreement with the stated governmental policy that work should commence immediately on a rail line to service the Pine Point area and to provide a freight distribution terminal in the



Northwest Territories.

This Chamber wishes to go on record, however, as favouring routing this rail line from Grimshaw, Alberta, north to terminate at Hay River, Northwest Territories, where harbour facilities are available and a town of sizeable proportions is equipped to service the terminal operations. It is submitted that the natural escarpment running east and west some thirty miles south of Hay River would be an economical route for spur lines or extensions to service the Pine Point area to the east and also the Sulphur Bay mineral deposits to the west, when these areas are developed.

We would wish to strongly stress that regardless of the point of origin of this rail line that Hay River is the logical terminal at this time as it is an economically stable community, with existent wharfage facilities and the only natural harbour on the south shore of Great Slave Lake capable of handling the expected tonnage. This harbour extends, at minimum three miles of protected area that can be developed for full wharfage facilities for an extremely small percentage of the cost that would be required to create an artificial harbour at any other location on the south shore.

It is further noted in consideration of the present price structure for base metals that a



rail line terminating at Pine Point would in effect be servicing an area not likely to be developed for several years and freighting alone would not support a town of any proportion. Furthermore the faith and work that has been displayed by the local residents of this frontier area in creating the town of Hay River should not be arbitrarily jeopardized by the creation of an artificial settlement with a subsidy of government capital, to handle freighting services only, which presently is carried on here. As noted Hay River has been developed to date by approximately 75 per cent private capital which is one of the few exceptions in the development of settlements of any size in the Territories to date and government should be prepared to support us in any justifiable claim. If any additional cost in the construction of the railroad to this point it would be more than offset by the savings realized in the utilization of the natural harbour at Hay River.

Notes re Northern Development

There appears to be no tangible evidence of any mineral deposits along the proposed eastern rail route, with the exception of a gypsum deposit, of which there are many throughout Canada. These so-called huge investments which are going into the proposed area to be served are a mere drop in the bucket compared to what has already been invested



in the western route on the expectations of the rail outlet promised. Perhaps some of these proposals could have been brought out in an effort to justify a change, as it is only such a short time since anyone has thought about, discussed or brought up the question of any other route but the western.

Timber can be discounted, as it has been proven, according to experts in the field, the lumber industry has been adequately developed to handle this resource. In many cases lumber is being trucked competitively many hundreds of miles. At the present time lumber is trucked 300 miles north from the Grimshaw area and planed at a planing mill located at Hay River for shipment north again at competitive prices. Also a product so vulnerable to destruction by fire would not prove to be a sufficient inducement to bring a rail line in.

I would like to make a quotation that was taken from the National Conference in Edmonton held on May the 2nd, 1957. The notes are copied of the report of the conference.

"An interesting question was posed to the
"panel on the question of whether or not
"business in the area under study was
"mature enough to undertake partial or
"full development of the resources of
"the North. Mr. Hamilton of Swanson
"Lumber Company, member of the panel,



"stated that as the lumber industry had develop-
"ed to adequately handle the timber resources,
"there was no problem in this regard. However,
"there was reasonable doubt whether pulp and
"paper development possessed the same matur-
"ity. Basically the problem was to get
"enough raw material."

That was on May 2nd, 1957.

THE CHAIRMAN: That is Mr. Hamilton?

MR. PORRITT: That is Mr. Hamilton of
Swanson Lumber Company.

THE CHAIRMAN: Have you a quotation of
something he said?

MR. PORRITT: That is a quotation of what
he said, from the Conference.

THE CHAIRMAN: Would you mind quoting it
again?

MR. PORRITT: Notes on discussions on
Industrial Development, May 2, 1957.

"An interesting question was posed to the panel
"on the question of whether or not business
"in the area under study was mature enough to
"undertake partial or full development of
"the resources of the North. Mr. Hamilton
"of Swanson Lumber Company, member of the
"panel, stated that as the lumber industry
"had developed to adequately handle the
"timber resources, there was no problem in



"this regard. However, there was reasonable
"doubt whether pulp and paper development
"possessed the same maturity. Basically
"the problem was to get enough raw material."

There is a little more here -- what
a railway to Great Slave Lake will mean to northern
development and the Northwest Territories.

It will reduce freight costs on heavy
commodities by 25 per cent to 50 per cent. It
will enable stock and inventories to be cut to a
minimum as against our present seasonal freight
system which in a great number of cases has neces-
sitated goods being carried in stock a year in ad-
vance to avoid delays in programs of development
being undertaken. This added cost discourages
many enterprises and individuals from developing
their interests, as well as new ones from being
established.

To the fishing industry it would allow
almost double the value of fish to be marketed
due to direct refrigerated cars; shipments would
be of improved quality from less handling, etc.;
extra use of by-products, now thrown away because
of transportation costs, could be utilized; heavy
losses due to transport delays could be kept at
a minimum; and almost double the season of the
present water services as from Waterways.

Example: first, shipments across Great



Slave Lake about June 10th to 15th, and last shipments that are accepted by Waterways about August 10th cross Great Slave about August 15th. With a rail terminal at Great Slave Lake some time could be saved in the earlier opening of navigation and the shipping extended to about September 25th for far Arctic points, enabling seasonal fruits, vegetables and other products to be shipped from our own crops instead of having to rely on bringing imported stocks from the U.S.A. to catch our present August deadline.

The importance of these shipments in many remote areas which rely on boat service cannot be stressed too strongly. Vegetables and seasonal fruits shipped early usually do not keep. This adds to the high cost of livelihood and is a disadvantage to health in general because of the lack of fresh goods.

Providence is situated on the northwest bank of the Mackenzie River approximately 50 miles below where the Mackenzie River leaves the Great Slave Lake, and at the north end of what is called the Providence Rapids, a 9-mile stretch of swift and difficult water. This part of the river can be navigated northbound with full tows -- that is up to eight barges -- but on the southbound run it is necessary to relay at one or two barges per trip, bucking a more than 8-mile current at places.



The settlement consists of a Hudson Bay Company trading post, an Indian school and mission operated by R. C. Mission, as is also a small hospital unit -- but no resident doctor; it is served by the Hay River doctor once a month. The population at present is a maximum of 200 natives and about 20 white people, including R.C.M.P. detachment and general building, which go to make up a small trading post. At present we have no industry there, but where the road development crosses the Mackenzie there are prospects of some service stations and cabins for motorists. At both sides of the river this is about nine miles south of Providence but unfortunately there is no protected water or harbour at crossing site so development of permanent harbour facilities would be difficult at this point at present.

Natural gravel ridges or old former lake beach levels could be used to carry a rail line east or west from a point a short distance south of Hay River.

That is the Hay River Chamber of Commerce brief.

MR. FEEHAN: Sir, in Mr. Porritt's second brief he discusses the relative advantages of the Ile du Morte harbour and the Hay River harbour. I was wondering if it would not be



advisable to ask him to make a little drawing of each of them just so that we know what he is referring to, before he reads his brief.

THE CHAIRMAN: Yes. Could you do that, Mr. Porritt?

MR. PORRITT: Yes.

THE CHAIRMAN: Just a rough sketch.

MR. PORRITT: Yes.

MR. FEEHAN: The docks at present would be where the letter "A" is located?

MR. PORRITT: Yes. They can't use the entire harbour; there is development all along the way. They have four oil companies all along the shore. It is all deep water, and there are other private installations. The Department of Dredging have their location here. So the whole ---

MR. FEEHAN: The Department of Dredging would be where the letter "E" is?

MR. PORRITT: Yes.

MR. FEEHAN: And you say that all along the west bank there are various other docks?

MR. PORRITT: Yes, various other docks, private docks, private companies. In the case of the Dead Man's Island, you have an island, and there are numerous reefs, and the shoreline comes in here.

MR. FEEHAN: The proposal would be to dig a harbour, dredge a harbour where the letter



"C" appears?

MR. PORRITT: Yes. This is all filled in with marshland.

MR. FEEHAN: The wavy lines represent marsh?

MR. PORRITT: Yes.

MR. FEEHAN: And the lines to the right represent reefs?

MR. PORRITT: Yes. This is the maximum, five feet. The difficulty lies in trying to get in here. If you had one barge you may not be able to get in here.

MR. FEEHAN: You say the maximum depth between the Ile du Morte harbour and the south shore is five feet?

MR. PORRITT: Yes, and it is only 400 yards.



THE CHAIRMAN: Thank you, Mr. Porritt,
for these sketches.

MR. PORRITT: They are not very good.
I can give you actual charts...

THE CHAIRMAN: We will understand what
you are saying, now.

MR. PORRITT: I could furnish you with
actual charts.

Now, this is rather a long brief. Would
you want me to read it through, or take sections of
it...?

THE CHAIRMAN: Just as you like, Mr.
Porritt. We would like to hear it all. If you
want to comment on it as you go along you can do
that.

MR. PORRITT: Yes.

SUBMISSION OF
ROBERT PORRITT

Much has been said with regard to the
starting point of this railway to Great Slave and
its possible routes, and I believe many good points
have come to light, or will come to light in the
hearings to be held. But not much has been said
about the terminal of this rail link. At least not
by people with Northern knowledge and a general
concept of what is required or available. Many



point to the map and say there it should be, and possibly they are right, from a wishful thinking standpoint. I can think of many individuals, and a few groups who would like to have the say, but there are many pertinent factors which enter into the question both from economics and usefulness, and if we are trying to develop the north in general.

HARBOURS

From the standpoint of harbours, I would like to mention the drawbacks to some locations presently under consideration. First, all that portion of the South shore from the Slave River Delta to approximately Sulphur point...

THE CHAIRMAN: How far is that?

MR. PORRITT: It is about 40 miles. It is in a kind of a moon shape.

THE CHAIRMAN: That is 40 miles as the crow flies?

MR. PORRITT: No, round the shore line.

THE CHAIRMAN: How far would it be as the crow flies?

MR. PORRITT: Oh, probably 35 miles.

THE CHAIRMAN: 35 miles direct?

MR. PORRITT: Yes; that is, air miles.

...is subject to very heavy silting from silt laden waters of the Slave River, which are carried to the coast line mentioned by the prevailing winds North-North east - any harbour along



this coast line between the points mentioned would have to be man made, and subject to both silting and ice hazards to its installations...

Along that shore there are hardly any islands to give protection; there are one or two out from shore; but out from Dead Man's Island you have no islands whatever; so, therefore, you will suffer the whole sweep, and all your installations in there would have to be very heavy to stand the pressure of the ice against it.

...costs of developing and maintaining would run to at least 25% of the cost of the total rail link.

It had been estimated that they were going to spend \$10,000,000 to develop Dead Man's Island Harbour.

COMMISSIONER GAINER: Whose estimate is that?

MR. PORRITT: This is Public Works' estimate.

COMMISSIONER GAINER: The Department of Public Works?

MR. PORRITT: It was estimated in the course of their reports. It happened that I was privileged to see it at some time.

COMMISSIONER GAINER: Do you have that report?

MR. PORRITT: No; you can get it from



Public Works. The Public Works Department could furnish that report.

COMMISSIONER GAINER: Would you know the name of the report?

MR. PORRITT: No; it was just in connection with harbour surveys; I couldn't give you the correct name of it.

The shore rock shelves out for long distances making it very shallow at most places, and with hardly any protection along the coast line it will not lend itself to the tow boat barge system that has been adapted to our Northern Transport systems with tow boats taking any number up to eight barges on tow lines in cases miles long...

In many cases the tow lines are miles long, and you can't break tows because you have no men on the barges. The barges are not manned barges; therefore, you have no means of breaking your tow lines; there would be no mechanical means of pulling in a tow line; and you can't have them close together on account of the heavy winds.

The ideal length is about 600 to 700 feet between barges, so that if you have eight barges you have a lengthy tow which, in some cases, is miles long.

COMMISSIONER GAINER: These are the same barges that are loading more on the lake than on the river; is that right?



MR. PORRITT: You see, with having about 1,500 miles of river route your barges are an adaptation of both river and lake barges; you couldn't have exclusively lake barges; so that we have to make the barges as near to lake barges as possible and yet be able to get through some of the shallow river.

COMMISSIONER GAINER: It was my understanding that they were pushed on the river and in rougher weather towed on the lake.

MR. PORRITT: Yes; about 90% are towed on the lake.

COMMISSIONER GAINER: But is it not correct to say that they are reshuffled at Yellowknife, for instance, and they are often reloaded at Providence or Hay River or across the lake?

MR. PORRITT: Some of that goes on, but the majority of the barges are loaded at the start. The facilities for loading are not as good at different places than where they have their own loading facilities. Therefore, they load for that distance, if possible. If they unloaded part of the barge they would try to load it up.

COMMISSIONER GAINER: Could you tell me, in the case of Northern Transportation Company what would be the routing of the Yellowknife cargo, for instance?

MR. PORRITT: Well, Northern Trans-



portation has their home base at Fort Smith. I would say 80% of their cargo comes through the port of Fort Smith at present. In the spring they carry full shipments out of Hay River, and in the fall they carry full shipments out of Hay River. They have that during the midsummer; they have taken several tons out of Hay River and Yellowknife Transportation weren't able to cope with the extra freight.

COMMISSIONER GAINER: The freight moving out of Yellowknife is reshuffled at the portage -- is that correct -- and loaded on the barges at Bell Rock for down river traffic?

MR. PORRITT: That is the portion that comes down the water route to Waterways; but at the moment Hay River portage handling according to the only figures we have available -- is handling more than is the port of Fort Smith.

COMMISSIONER GAINER: That would include mostly petroleum products?

MR. PORRITT: That would be the heavy part of it; and heavy machinery and heavy equipment and motor vehicles which can be driven over the highway -- that could be hauled. You see, the handling from the truck to the boat and from the boat to the truck and from the truck back to the boat means a lot of handling. It is a costly operation to ship it direct from Edmonton



by truck, or from wherever it originates, direct by truck to Hay River and then transship.

COMMISSIONER GAINER: And what harbour facilities do they use at Hay River?

MR. PORRITT: A lot of them bring these here fork lifts -- some of them have some of these -- and they use the facilities, too, that are available in Hay River. They have several of these big drag lines available, and they have a lot of fork lifts as well. There is a lot of equipment there at the moment.

COMMISSIONER GAINER: They use their private facilities at Yellowknife?

MR. PORRITT: Yes; some of them own their private facilities, or Northern own their private facilities. They have some properties there which they haven't developed as yet.

It should be readily seen the difficulty of getting into a harbour with these long tows unless the harbour is miles deep with a straight channel running into it, and protected at least the length of one's tows which might be over a mile long. (We must remember we are dealing with an Inland Sea and not just a mere Lake). For a commercial harbour you will have to have accommodation for many such outfits taking up almost half an acre for each barge and during a storm it would be used as a harbour of refuge for many craft from



the standpoint of shore installations, oil storages and accommodation and other developments required are at present nil in many of these proposed harbour developments - and even the shore line at some points is not suitable and would not lend itself to development...

With so much shallow water you would have a lot of difficulty putting anything on the shore. You would have to go out to deep water which might be anything to a quarter of a mile before you could get water for the river boats to use in some places.

In the Pine Point itself, where the Consolidated Mining and Smelting have developed, they have to load their boats at the points where the original prospecting goes on, but bedrock is only just 4 or 5 feet deep, so that when a boat goes in there with the prevailing wind there is a rough sea comes in, and whenever there is an east wind then the boats are just bouncing on the rocks.

The C.M. & S. Company, in discussion with their men -- they say that their company hasn't too much interest in harbour facilities at Pine Point or anywhere else; they are interested in the railway outlet to their mine which is 13 miles north from Pine Point; and if and when the railway is brought in they would use that railway to bring in their supplies. So the harbour wouldn't be a



help to the C.M. & S. as a company.

THE CHAIRMAN: Where is it that the C.M. & S. boats have only four feet of water?

MR. PORRITT: The dock at Dawson Landing, which is called Pine Point; it is within a couple of miles of Pine Point. Dawson Landing is...

THE CHAIRMAN: That is at Dawson Landing. Is there anything for their boats there now?

MR. PORRITT: No; just a little bit of dock that was built by C.M. & S; but they can't get into the dock anymore with the 4 feet of water; they can't go in there if it is rough; and that is limestone formation on the bottom.

At the much mooted Dead Man's Island - where Governments of the past years have spent huge sums of money and there is still hardly room for one barge...

They have spent, I believe, one hundred million dollars up to the present on Dead Man's Island Harbour.

I was in there in my own boat, and mine is a small boat. If I had been in with a bigger barge it would take about half again; you would only have been able to get one barge in there; it hasn't been developed enough; and being subject to silt I would think it would be all filled in again; it is too open to silt.



COMMISSIONER GAINER: Are you still speaking of the Department of Public Works? That is the only engineering surveys that you know of that have been made?

MR. PORRITT: Yes, it is the only engineering survey which has been made on Dead Man's Island. I was actually using the harbour, not trying to use it.

It is a difficult entrance to navigate to get into and no possibility of making it suitable for long tows of barges no matter what is done - any extension has to be dug out of brush covered marsh. The result of silt filling in over the number of years.

HAY RIVER

On the other side of the picture we have a natural harbour with all these requirements capable of handling any and all of the boats and tows mentioned...

In the straight entrance there at Hay River the Hay River doesn't take silt at all on the river. The only sand that gives any trouble to the Hay River is what drops in from the lake. That is lake sand. As the water is getting further away from the Slave River it would leave silt up at the river; so that the hazard of silt isn't as great at Hay River -- only 25% of what you would get at Dead Man's Island.



One dredge is able to keep the channel well open during the summer.

In the case of Hay River we have only developed one side of it yet. The other side of the river -- it hasn't been used at all. There is a lot of harbour at Hay River. We have had as many as five or six boats there.

We have also harbour facilities for docking boats for the winter in protected water; and sometimes we have had as high as ten barges and seven or eight tugs in there frozen up for the winter -- which you can't do unless you have protected water.

...and can be entered in almost any storm with its straight entrance and over three miles of protected deep water harbour in one of the few silt free rivers of Canada, the Hay River.

Here we have established industry and installations and development costing much time and money -- also an abundance of a resource so necessary in our North's development, the human resource, one so often overlooked -- and a resource that the North's development will depend on so much.

RE: HUDSON'S BAY RAIL AND TERMINAL

I would like to mention here a fact that the Hudson's Bay Railroad was designed to go to Port Nelson for its terminal, and after much money was spent on development and installations it was



abandoned because of heavy silting and storms causing much damage and Churchill was selected. This history could easily be repeated if attempts are made to make a harbour in the vicinity of Pine Point or Dead Man's Island.

COMMISSIONER GAINER: This won't necessarily be fair to you, but I am wondering why would you suppose that the Department of Public Works would have spent so much time investigating this Dead Man's Island area and the Pine Point area as opposed to Hay River -- or perhaps they have been into Hay River as well, extensively?

MR. PORRITT: I would like to be able to answer that, but a person would have to have studied human nature a great deal more than I have to understand a lot of things that go on.

I could give as one reason, myself, that, some years ago we had a flooded condition at Hay River. These flooded conditions were caused by a number of fills put into the river channel. The Hay River delta consists of five channels and they filled up three of them; and that left it with high banks. Like, they built dams across it. They didn't consider nature at all. They wanted to use that -- Hay River is on an island, and they wanted to use that Island.

Well, these fills caused the floods. They held the water back. There wasn't the



natural relief channel that there has been in years past; they weren't there; and we had about two floods in five years. It seemed quite serious.

At that time the Northern Affairs Branch in Ottawa took a dim view of any development at Hay River.

Here we have one section of Government sitting back and holding back, sort of trying to find out some solution to the development and another department of Government going ahead spending money -- we have had ten million dollars spent on the Hay River of a permanent nature -- Government buildings, Fishery Resources Branch, Public Works. They have spent a huge amount of money in warehousing.

COMMISSIONER GAINER: I wasn't interested in the political interpretation but from a technical point of view. What has the Department of Public Works been looking for? Is it for what is to be found in Hay River, or are they investigating several sites?

MR. PORRITT: They have investigated about four other sites as well, but they have abandoned them. They surveyed a town site and decided to abandon it, and all of a sudden gave it up.

COMMISSIONER GAINER: Is there evaluation of Hay River in that report as well?

MR. PORRITT: I don't know. They



have it. They could give it to you.

COMMISSIONER GAINER: But you feel that they have done extensive engineering studies in Hay River as well as at Dead Man's Island?

MR. PORRITT: I think they are quite aware of the possibilities of Hay River.

I believe my own interpretation would be that the reason they have tried to develop Dead Man's Island was that they felt it had to be at Pine Point and, therefore, the harbour had to be there.

COMMISSIONER GAINER: But so far as you know there is no serious technical obstruction in their mind to the Hay River site other than, perhaps, silting at the delta? What about the flooding? That could be controlled, presumably?

MR. PORRITT: Yes, it could be controlled. I would be quite agreeable that they have nothing definite.

COMMISSIONER GAINER: Nothing that you know of?

MR. PORRITT: Nothing that I know of.

FREIGHT AND SERVICE - HAY RIVER HARBOUR

With the advent of the Mackenzie Highway a new link was forged - the importance of Fort Smith as a transport centre is steadily being replaced by the harbour and transport terminal of Hay River, N.W.T.



It is very encouraging to see the steady increase in tonnages being handled through Hay River - while maybe the profits are not so great due to the road haul and sometimes difficult road conditions do believe there is competitive comparable rates on the two routes, but shipments via Hay River are almost seven days closer to the Arctic due to being more direct and avoiding the bottleneck of the portage at Fort Smith - and the many handlings of freight from train, boat, truck and back to boat. Also with little aid shipments can be weeks earlier in the spring leaving for the Arctic, and there's no question about the season can be extended a month or more in the fall -- giving almost double the present shipping period for shipments, than does the present water route from Waterways, McMurray...

The question here is that a lot of people wonder why it is closer to the Arctic. In the matter of trucking from Edmonton, if there was a railway it would be similar time -- 24 to 48 hours -- Edmonton to Hay River. If it was by road directly to Hay River it would be normally 48 hours. You are, then, saving much time even at Waterways; and you have a 3-days boat trip; but it would be up to the same point it had started -- at Hay River -- but Hay River saves you 260 miles of water north from Port Smith.

COMMISSIONER GAINER: And how would you



parlay the seven days into a month?

MR. PORRITT: Seven days closer to the
Arctic. That is in terms of shipping, not in
terms of seasons.

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COMMISSIONER GAINER: Now, I can understand that, but how do you tie that up, giving you a month longer? I can see how it may well give you the extra week from shipments leaving McMurray, for instance.

MR. PORRITT: I don't know why it is that the Northern Transportation -- the only way we can take the length of their season is to take the dates they cut off the freight. If they cut it off around the 16th of August, that is their cut-off date, well, what purpose I don't know. We have a trading company that has been operating a boat for ten years, and only in one year of the last ten have they not got to their destination, and that is with wooden equipment, and they leave Hay River about 25th September, and that is how I get the extra month. If the freight could leave Hay River -- it is a much shorter trip from Hay River down, and it could leave Hay River at that date.

COMMISSIONER GAINER: I think we have had evidence -- I believe the suggestion was that there is always a certain risk factor and you have to more or less hit the average closing dates so as not to get caught. But I can well understand how you can always get the time involved in 300 miles of waterway.

MR. PORRITT: You only have 30 miles



of lake and then strictly river, and the river from there on is slower in freezing than, say, up in the delta land, Slave River and Athabasca. The company for many reasons, I guess, have cut it off. I don't know why it is cut off. This year Northern Transportation have just loaded three steel barges last week, and I believe they are taking more out the Hay River. That could not have been if it hadn't been for Hay River, because the deadline was already passed when oil companies found a way of getting it in in time. So with having that route open in many cases they are getting freight through that they wouldn't ordinarily get through. If an absolute emergency arose you could leave with the ice and get down with the equipment used by the commercial companies.

THE CHAIRMAN: Mr. Porritt, it seems to me that your argument is that because of the highway that goes into Hay River now some time has been saved and shipments can be made from Hay River. But our concern is this, isn't it: what is the difference between a harbour in Hay River and a harbour that might be built, say, at Dawson Landing or the Slave River? Supposing you had a boat stationed at the mouth of the Slave River and one at the Hay River, would one be able to get in earlier than the other?



MR. PORRITT: It could be. There are only 30 miles there, where there are one hundred and something from Slave River.

THE CHAIRMAN: Supposing it is at the mouth of the Slave River?

MR. PORRITT: It has still got 100 miles across ice on the lake.

THE CHAIRMAN: But is there more ice on the lake at the mouth of the Slave River than at the mouth of the Hay River?

MR. PORRITT: As soon as the ice starts to break up they will get started down the river there, the boats will get started along the edge of the ice; whereas on the Slave River it is often much later because they can't get out of the river, they have that much more open ice to get across.

THE CHAIRMAN: How much earlier is it on the Slave River?

MR. PORRITT: It varies; but sometimes it has been two weeks and sometimes it is only days.

THE CHAIRMAN: From two days to two weeks?

MR. PORRITT: Yes.

THE CHAIRMAN: That is the difference in the fall, freeze-up?

MR. PORRITT: You are just depending on whether the boat is going to go home. If it is going to try and get back across the lake, the weather is bad, and therefore Hay River has the



advantage for such a short lake haul.

THE CHAIRMAN: Is the weather usually bad in the fall just before freeze-up?

MR. PORRITT: Oh, it is very bad.

THE CHAIRMAN: Is it your opinion that shipping can be carried from Hay River later in the fall than from Slave River?

MR. PORRITT: Very much later. If transportation is developed with the use of ice-breakers or icebreaking equipment, they could even extend it longer than that, because they are working in deep water, especially across the lake. That would be true of the other place as well, although from Mackenzie it would be 30 miles, whereas from Slave River it would be over 100 miles.

COMMISSIONER GAINER: I suppose Fort Providence would be even more preferable?

MR. PORRITT: It would break up sooner. The only disadvantage to Providence is that you are coming back upstream almost sixty miles before you get into the river again, and you have the Providence Rapids to come up, unless you are established above them, and then that wouldn't be Providence, that would be some new point.

COMMISSIONER GAINER: How far east would that be?

MR. PORRITT: There are approximately nine miles of rapids there, Providence Rapids, and



they have to relay barges going upstream, whereas downstream they don't have to relay them. They can consolidate their barges at Wrigley Harbour, but coming up they have to separate the barges in ones and twos.

COMMISSIONER GAINER: The barges are upstream or downstream from the proposed highway crossing?

MR. PORRITT: I think the highway crossing is approximately at the rapids, just above the rapids. I don't know whether it is the intention, where they might build a bridge, whether it is further above that or not. You have not too much protected land there. No installation would be safe from any ice floe; they would have to look into the ice question first.

COMMISSIONER GAINER: It would not be so difficult as the lake ice on the south shore?

MR. PORRITT: The river ice often blocks, you get more there and it is piling up behind. Shore installations can be damaged unless they are protected. It could be protected, of course; there is nothing impossible, but just the money angle, expenditures.

THE CHAIRMAN: Mr. Porritt, we have been talking about the difference between the transportation seasons for Hay River and Slave River. I think you said that it is some two days to two



weeks in the spring that Slave River has an advantage over Hay River?

MR. PORRITT: That Hay River has an advantage over Slave River. The major transports, of course, as Mr. Gainer brings out, have more or less taken the risk into consideration, and in considering risk maybe they have cut off the season pretty soon; but we have private people going down a month later.

THE CHAIRMAN: How much later could you operate at Hay River in the Fall than at Slave River?

MR. PORRITT: Well, they are operating almost a month now, and I would be quite prepared -- My own solution to the far north trading is that I think the boats should stay and go down with the ice and come back in the spring, therefore any freight from the north would be back ---

THE CHAIRMAN: But that applies equally from both rivers?

MR. PORRITT: Yes.

THE CHAIRMAN: How much longer can you operate the boats in the fall from Slave River than you can from Hay River? Is it a matter of days or weeks?

MR. PORRITT: It is weeks.

THE CHAIRMAN: You are not suggesting this, that somebody at Hay River operates his boats later notwithstanding the risks, than the man at Slave



River. That doesn't interest us at all. Suppose the same operator has two boats, one at the mouth of the Slave River and one at the mouth of the Hay River, the same operator, which one do you think would operate later in the fall?

MR. PORRITT: I think the Hay River one; I feel quite confident he would.

THE CHAIRMAN: How much later?

MR. PORRITT: I would say two weeks.

THE CHAIRMAN: Why would he operate for two weeks later?

MR. PORRITT: Because he is operating closer to his home port.

THE CHAIRMAN: If his home port is Hay River, that's fine, but suppose his home port is Slave River?

MR. PORRITT: Of course, you can establish it there, but there isn't any suitable area for establishing it.

THE CHAIRMAN: Suppose there were one there?

MR. PORRITT: Maybe it would cut it down to a week from Slave River.

THE CHAIRMAN: Let's suppose there were the same facilities at the mouth of the Slave River as at Hay River?

MR. PORRITT: I would say there would be a week.



THE CHAIRMAN: Why a week?

MR. PORRITT: Because of the weather conditions.

THE CHAIRMAN: Is the weather different at Hay River than at Slave River?

MR. PORRITT: Yes.

THE CHAIRMAN: The weather conditions are different?

MR. PORRITT: The weather and the fact that if you were loading back to the Slave River you would have the impossibility of getting in there, whereas at Hay River you would either get into the river or you would get into alternate places. If you were coming up the Mackenzie River you would still have road facilities which you could use if you were frozen in.

THE CHAIRMAN: There is one week. By and large, there is a week's difference between the kind of ice that forms which is an impediment to the mouth of the Slave River as to the kind of ice that forms at the mouth of the Hay River?

MR. PORRITT: Yes, if there was some kind of a harbour.

THE CHAIRMAN: This all presumes that the traffic comes from either one of those rivers down the Mackenzie?

MR. PORRITT: Yes.

THE CHAIRMAN: What about traffic between



the south shore of the lake and, say, Yellowknife?

MR. PORRITT: In the fall you wouldn't have too much difference, but in the spring you would. It could be the same.

THE CHAIRMAN: Why is it different in the spring?

MR. PORRITT: Because the ice lies in that part of the lake longer.

THE CHAIRMAN: You can get out around the edge of the ice, can you, around the west?

MR. PORRITT: Yes. Often the first boat up the river comes up the Mackenzie and gets into Yellowknife first. It has happened several times in the last few seasons, from the Mackenzie River, coming up the Mackenzie. That has happened several years now.

THE CHAIRMAN: There is about one week's difference in the spring?

MR. PORRITT: Yes.

THE CHAIRMAN: That is because of the ice that forms ---

MR. PORRITT: It breaks away from the shore.

THE CHAIRMAN: -- in the middle of the lake?

MR. PORRITT: Yes, and the ice lies at the east end, that is at the islands, lies there much longer, and gradually can break loose and drift across the channel.



COMMISSIONER THOMPSON: You just mentioned that if you had a harbour at Providence you would be subject to river icing conditions. You don't consider that between Big Island and you have icing conditions. If you go further down to Simpson you get river ice conditions, but you don't get it at Providence?

MR. PORRITT: Some seasons we do. It slows down and then builds up pressure.

COMMISSIONER THOMPSON: You mean ice coming out of the Slave Lake and piling up?

MR. PORRITT: Yes, lake ice, not ice from the river itself.

COMMISSIONER THOMPSON: But that is not as dangerous as river ice?

MR. PORRITT: The further down you go the more you get.

COMMISSIONER THOMPSON: It comes down between the two islands and it is not a very big floe when it comes down?

MR. PORRITT: No, but sometimes there is a jam.

COMMISSIONER THOMPSON: You can hardly consider that you would get as bad icing conditions. They are not really rapids there -- ripples mostly?

MR. PORRITT: Yes. Beaver Lake itself fouls up.

COMMISSIONER THOMPSON: That is the



Mackenzie River, actually, isn't it?

MR. PORRITT: Yes, part of the Mackenzie River. But there are times the ice comes down Mackenzie when the boats are held up. This spring they were held up for eight days at Wrigley Harbour; that is lake ice going down the Mackenzie River.

THE CHAIRMAN: Mr. Porritt, we are asking you a lot of questions. I hope you don't mind.

MR. PORRITT: No, I don't mind.

THE CHAIRMAN: I wonder if you would first come back to the first paragraph on page 3 under the heading "Freight and Service - Hay River Harbour". You say: ". . . the importance of Fort Smith as a transport centre is steadily being replaced by the harbour and transport terminal of Hay River".

You pointed out that there is an increased amount of freight being disposed of, but is there any less being handled at Fort Smith?

MR. PORRITT: Well, the only reports are the reports of Northern Transport themselves. Knowing that here it is going up, and Northern Transportation themselves have indicated -- I don't know whether it is press releases, but in the press it was indicated there were 120,000 tons handled by Northern Transportation, of which 20,000 tons went to Smith and north.



THE CHAIRMAN: Is that less than they used to handle?

MR. PORRITT: Yes, very much less. There were 52,000 tons went through there in 1952 at one time, and I believe it is steadily going down. We haven't got official figures, except what we read in the press.

THE CHAIRMAN: Are you giving us any figures about freight that is being handled through Hay River?

MR. PORRITT: It is in the brief later on. Anyway, the Yellowknife Transportation Company estimate their loadings to be just over 40,000 tons up to Hay River. They estimate their loadings at over 40,000 tons for this season, 1959.

THE CHAIRMAN: What proportion of the total freight do they handle?

MR. PORRITT: Well, that is to Yellowknife and to the Arctic. I imagine they handle about 90 per cent of the freight through Hay River; that is water-bound. We have some private companies hauling their own. Northern Transportation will probably haul a couple of thousand tons out of there a year.

THE CHAIRMAN: But Yellowknife Transportation handle 90 per cent?

MR. PORRITT: Yes, about 90 per cent.

THE CHAIRMAN: And they have estimated over 40,000 tons in the last year?



MR. PORRITT: Yes. To make up a lot of that total there are over 4 million gallons of petroleum products which is brought in from the outside, some as far away as Calgary, some from Edmonton. There are over 4 million gallons this year, and that includes alkalide. Some of that oil goes to Fort Smith, some is loaded at Hay River, comes in by truck and goes up to Smith, because partly the trouble is in hauling it over the portage, I believe; that is one of their troubles.

There has been much talk of the Great Slave Lake Railway to Pine Point. Not many, I believe, understand the significance of this railway, if it is to develop the north.

THE CHAIRMAN: Have you dealt with the first paragraph at the top of page 4?

MR. PORRITT: I have read the bottleneck of the portage. In discussing the lumber question, it was said that the lumber was carried free, there was no difference between the Waterways rates and the Edmonton water rates. That includes sugar, milk and other commodities. If we were bringing in lumber, we were bringing in commodities which were not manufactured in the country, and there is considerable advantage at the moment in taking it to Grimshaw and Peace River, and it is felt that there would be an advantage to come to



Hay River, wherever the terminal would be. That is how I think the cost of developing the North could be cut down considerably, by having the supplies in the North.

THE CHAIRMAN: No matter which route hauls it?

MR. PORRITT: Yes. It would be having a warehouse and developing it. The population is as stated previously, and considerable money is spent on the Hay River now, and these people would be a big asset as against establishing a new place which would more or less have to be subsidized from the very start, because you wouldn't have the population there or the industry there.

At the present time there are four different oil companies; it is the only place where you have competitive oil sales -- Hay River. Imperial Oil has an exclusive at all other points. There is a company has started to establish, but they haven't established any definite stocks except at Hay River.

THE CHAIRMAN: Would you go back to your brief, Mr. Porritt? You referred to Pine Point having a very large deposit of lead zinc?

MR. PORRITT: Yes. Pine Point is on the eastern tip. When I say Pine Point, that is a point on the lake. It is some 13 miles southwest of Pine Point itself, and that is



where the development started, and the indicated orebodies lie more to the west than they do to the east in that section. We have had American people and other companies stake properties and done work on it even west of the Big Buffalo River, which brings it to about 15, 16 air miles of Hay River. It wouldn't necessarily go to say that this development would have to be Pine Point if the transportation link was coming further west; they could possibly or would possibly work the western end of this deposit instead of the eastern end of it.

THE CHAIRMAN: Where is the underground now?

MR. PORRITT: It is at the east side. The only work on the west has been diamond testing. There is water there at the moment. It may be open-pit work when they do start because of the water problem. They have water at a depth of about 100 feet, they had struck water, and they have only been able to lower it a little bit by pumping all summer. They will probably find a solution to de-watering it, but it wouldn't be underground work, it would be probably open pit work, anyway. I don't know what the solution would be. I don't think there is any reason to say that the development would have to be at that particular point. The company, of course, has that choice, where they want to develop.



Also, there are over a thousand claims staked further to the west of Hay River and north of Slavey Point, or the back of Slavey Point; but I don't know what the results have been or whether the company has made a number of plans...

THE CHAIRMAN: When was that done?

MR. PORRITT: That was three years ago.

THE CHAIRMAN: Are they still working on it?

MR. PORRITT: We don't see any activities, but, I mean, I am not prepared to say. I don't know what is going on. But there were over a thousand claims staked there.

MR. FEEHAN: That would be on the north side of the lake?

MR. PORRITT: Yes, that is on the north west of Hay River.

It does indicate there must be some indication of lead zinc when they staked these claims, and it might indicate that there are mineral bodies to the west as well.

This railroad should terminate at a harbour before any use in development could be felt. Pine Point is just a dot on the map. True, it is on the eastern tip of possibly the largest known lead zinc deposit in the world which extends west almost to the Hay River. But to benefit the balance of the vast storehouse of



minerals lying around the Great Slave we must have a harbour from which ore barges and other means of transport can service the dozens of potential mines.

There is nickel in the Francis River area; there is copper in the Barnstorm River area. There are many mineral showings. Whether they are mines or not is a different thing, but there are indications of claims staked; and much of the islands at the east end of the Great Slave Lake are staked.

There is a uranium showing just a few miles from Snowdrift on the east end of the lake, which is on -- I believe it is Stark Lake -- but it joins into Great Slave Lake. There is a uranium showing there. I couldn't say -- I mean, it would be very difficult to say whether they are mines or potential mines.

Let us not lose sight of this factor and press for our rail link with the Great Slave, be one not concentrated alone with servicing one mine, but let us be determined to ask that the rail be built to the established and only natural harbour on the south shore; let this connection be as short and direct as possible, servicing the country in the best national interests. We would all like to have it pass our door, we would all have some preference or other, but we must serve the



maximum amount of residents plus natural developments and industrial areas and supply points; when and if this line were built, if properly located, it could be a service from its first few miles, and the time taken in to its final completion would not be lost as with every mile of extension new freight would be secured and service rendered to long-time established residents.

If it was built on the west route it would be a service for an area which is already established. They are operating, but only operating under difficulty so far as the Fort Vermilion country is concerned.

The farm area is well established, but they wouldn't have peak competition when they have to take their material to the rail head.

Fort Vermilion was established long before the Peace River. At one time Fort Vermilion was the breadbasket of the north. All flour used to be milled at Fort Vermilion and shipped north. But with modern machinery these little fellows have been put out of business. The Hudson Bay used to send in seal of quality flour and they used to mill it there and the Indian didn't know the difference; he got his seal of quality flour.

I haven't got all of Sheridan Lawrence's history...

MR. BALDWIN: I was mentioning the late



Mr. Sheridan Lawrence who brought the first threshing machine in from Edmonton in the fall of 1900.

THE CHAIRMAN: How did he get it in?

MR. BALDWIN: Over the ice and snow in the wintertime.

MR. PORRITT: We have had a telegraph service to Fort Vermilion since about 1910 -- telegraph lines. They have fallen down now. The Alberta Government are remodelling them with microwave.

But the country has been a long time developing. A lot of people don't realise the length of time there have been people in that area. Those people have been expecting transportation of some kind; they are getting roads now; the roads are gradually developing. It takes as long to get from Fort Vermilion to Edmonton as it takes from Fort Vermilion to Vancouver.

In appraising the prospective development of any industry one important and undisputed factor should be kept in mind -- the future is unknown. Yet, many factors indicate possible trends and requirments of uses of our raw materials. In many instances world markets are the controlling factor, hence transportation is our own problem, because no one will come and get it except at Seaboard. For every dollar value of raw material at the market only about 30% of it



goes to produce it. The rest is used up in transport and handling to where markets are.

The transport costs are quite heavy; and, therefore, it would seem that if we are going to develop the country we will have to have cheaper transport.

Let us not lose sight of the fact that to build a transport link we are creating steady employment for a large portion of our population -- both building and operating -- and that new sources of wealth, both to labour and industry, are being created.

In building a railroad it would seem they would have to have a road on the eastern section.

To build a railroad it is general that some type of road would have to be built. If in the eastern section, there is no road; whereas, in the west the MacKenzie Highway travels much of the route and many hundreds of miles of Oil Company development roads exist, criss/crossing the area every few miles, until it becomes almost a patchwork of trails and roads. Many of these will be helpful in surveys and in the building of the railway lines, and I must mention also the gravel which is plentiful almost the entire length of the western route.

I have a remark here which was made to me by a surveyor -- and I don't know if he was



truthful -- but he said there was no gravel for a whole stretch of 50 miles on the eastern route. He was one of the engineers who worked on the line; but I think that gravel is very scarce along the eastern route, except the first section of it.

At one time, probably a couple of hundred thousand years ago, I believe Lake Athabasca and Great Slave Lake was one lake; and the Slave River drainage system runs through parts of the high land in the area -- there are probably islands and lake levels -- and this delta land doesn't lend itself very readily to building a railroad.

I haven't got the aerial pictures here, but I have hundreds of them at home. These aerial pictures can be got from Government photographs; and following along the route of the Slave River you can see hundreds of river channels and old beds and things like that that wouldn't lend themselves to building a railway line through them at all.

I have been operating a saw mill down on the Slave River itself, getting closer to the delta, and there we couldn't venture hardly from the mill. There would be certain high spots you would have to keep on the tractor in the summer. It was dry to walk on but as soon as you went on it with the machine it would bog right down.

It would be almost impossible, as well, to build roads in the area, especially when you get



some distance north of Fort Smith; and the closer to the delta you get the worse it gets.

In the area back of Pine Point is more similar bog. In the Pine Point they are all former lake beds, and behind that seems to be the drainage channels for the high ground. When you get away from the drainage channels it is bog and wet land and it wouldn't lend itself very readily to any type of railway construction. They would be possibly two thirds of the way from Fort Smith; if they were close to Fort Smith two thirds of it would be on the bogland to Pine Point.

Also, the eastern route at many places is subject to much flooding -- The Claire Lake is often double its normal size -- by high water seasons, as are many hundreds of sloughs, lakes and rivers of the general area. The Peace River, Athabasca, Slave and many other rivers with which the eastern route has to contend are bad rivers for ice and flood conditions as well as exceptional heavy carriers of silt and debris, making harbours both hard to establish and maintain.

Those rivers are very bad for flooding over their banks, especially when you get close to the delta land -- especially Lake Athabasca; and down there all these rivers are bad. They flood over their banks quite a lot. If you are putting in harbour facilities the thing I had



in mind at Pine Point is that I believe there would be serious difficulties there.

THE CHAIRMAN: Are there difficulties now with the harbour at Fort Smith?

MR. PORRITT: Well, there is no harbour at Fort Smith. They used to load at the river. The harbour facilities have been moved to Bell Rock which is 9 miles...

THE CHAIRMAN: Yes, at Bell Rock, rather. Do they have difficulties with the harbour at Bell Rock?

MR. PORRITT: Yes; they have some dredging there; but they can't leave boats in the water. They must take them out of the water there. They have occasionally left them and got away with it, but not very often. It is difficult. It is just a river harbour.

There hasn't been too much damage to the harbour facilities themselves. But leaving boats -- they have to take everything out of the river itself. At Fort Smith the nature of the bank sliding...

THE CHAIRMAN: Well, it is 9 miles anyway to Bell Roack, isn't it?

MR. PORRITT: Yes.

THE CHAIRMAN: How do you spell that? Is it B-e-l-l-e?

MR. PORRITT: I think so, yes.



In the case of a terminus of the rail line proposed in the general area of Pine Point, I would like to point out that all the portion of the Great Slave Lake within 40 miles of the entry of the Slave River along the south shore is subject to exceptionally heavy silting, with the result that if harbours are built it would be almost impossible to maintain one any closer than Hay River without continual -- 24 hours -- dredging, more so where breakwaters are a necessity.

Fort Resolution Harbour is a clear example of this, where docks have been built and you cannot get near the docks with anything bigger than a row-boat. Fort Chipewyan also is an example of this same condition on Lake Athabasca. Prevailing winds bring in the silt to fill in quickly harbour facilities.

They have difficulty in keeping their docks at a sufficient depth.

Then to come along to human resources, we seem to have forgotten, or to be overlooking, one of our greatest national resources, without which no industry or development will ever go ahead; and that is the human resource. Surely they are to be considered, and when, and if, a remote area is developed it takes considerable privation -- guts and pioneering spirit -- before the would-be policy makers can take over with their usual armchair



authority.

You can't help but be bitter sometimes ...

THE CHAIRMAN: Has this any bearing on the railroad?

MR. PORRITT: The only thing is that human resources is a big help in building; you can't get along without it unless you bring people into the country.

THE CHAIRMAN: And you are arguing that there are more people than anywhere else along the lake where there might be a harbour?

MR. PORRITT: Yes.

THE CHAIRMAN: What about Providence? Are there many people there?

MR. PORRITT: I gave a little note on Providence; but there is a maximum of 200 natives living there. It is a trading centre. The Roman Catholics have a mission and a school. They are building a federal school now. It had been a mission school before.

THE CHAIRMAN: Yes, thank you.

MR. PORRITT: It is just a small trading centre.

In this human resources there would be no hardships along the western route. We have many contractors established along the highway at different points, doing general development and construction work; and there having been so



much publicity given to the fact of this railway being built many of these people are holding extra equipment there, expecting that they might get work; and they are holding that equipment along that whole route. They use the equipment intermittently, but the equipment is still there; and there is much equipment in the area.

On the cost of tractor work and grader work -- it is even lower than it is in some areas of the centre part of the province. I don't know for what reason, but there is even a lower rate for construction. Whether it is because the men are staying there for intermittent jobs, I don't know; but they do work quite reasonably.

Some time ago, when discussing this in Northern Development conferences, it was always agreed by the people who advocated the eastern group -- they were always ready to agree that the cost would be the same. They were ready to agree to that; but it is misleading there because they are not going to build two railways; they are only going to build one; there would be no means of comparison anyway. It would be easy to make that statement that the cost would be the same -- it follows easy along.

I mention a little bit about the areas between Fort Smith and Pine Point and Hay River on this route -- it is not particularly on this route--



it is even closer to Pine Point. To get into Pine Point they had to cut down almost to the lakeshore. To come in they had to cut down paralleling the shore of Great Slave Lake, and they had to cut down there because there is a big bog area there that extends east almost so far as the Slave River from Buffalo Lake -- from Buffalo Lake to the Slave River; there is a big area in there.

I will leave a map I have here if anybody wants to see it.

Re Comparative Construction Costs

While much has been said of the comparative cost of construction and supporters of the eastern route are very ready to state total costs would be approximately the same for either route -- this is very misleading and myself doubt any engineer would stake his professional reputation to hazard such a guess -- we all know that both will not be built, therefore, there would be no means of total comparison possibly anyway.

One has only to travel overland from Fort Smith to Hay River to plainly see the huge swamps, bog, salt marches and lack of gravel along the route; there is a large expanse of low land to the south southeast of the Pine Point discoveries that must be crossed if the rail was to come in via the eastern route.



From general knowledge of the country there is everything in favour of the western route where a wealth of building material is readily available and hardly any serious obstacles are to be encountered with only minor river and creek crossings. The Mackenzie highway extends the full length, a patchwork of oil roads and trails criss-crossing every few miles -- these would be helpful on surveys and during the early construction period.

There has been a proposal regarding the Uranium City service. They were wanting to service Uranium City with a railway line. I have got quite a few notes on that -- my own notes and from information I have been given.

Anyone who has lived or travelled around the west end of Lake Athabasca -- and knows the difficulty of channels and low water conditions, especially when aggravated by winds from the west which at times almost denude the area of water -- channels are difficult -- this would be an added hazard if the railway transportation terminal was moved from McMurray Waterways to Peace Point on the Peace River, which is advocated by eastern route supporters. In all fairness I'd want to make the statement that the routing of freight from a point on the Peace River down to the Slave and back up to Lake Athabasca would prove another



bottleneck for freight and would if anything be a more costly operation than the present service -- and am sure no cut in rate could be expected or forthcoming if the rail did choose the eastern route.

If a rail link is necessary or considered on the question of servicing Uranium City, then its location should be starting in the region of Prince Albert in Northern Saskatchewan and running through the potential high mineral area of Northern Saskatchewan along most of the route to the east end of Lake Athabasca -- servicing that area, and with further development of the north it could continue on through the still highly mineralized and power potential country till it reached the east end of Great Slave Lake, and if it was still desirous to develop more mineral and power potentiality it could continue on to the Arctic Ocean -- within its total length of some 2,000 miles . . .

That should be 1,000 miles. The stenographer has made a mistake.

It would be within the Precambrian Shield all the way.

I did some measurements on a map and I found it is only 925 air miles from Edmonton to Bathurst Inlet on the Arctic Ocean. If they are going to develop . . .



THE CHAIRMAN: What was that last thing you said?

MR. PORRITT: It is only 925 air miles from Edmonton to Bathurst Inlet on the Arctic Ocean.

It is a kind of interesting thing. It has no bearing except that if we are going to develop the Precambrian Shield and if we are sincere about it they could be right at the Arctic in a short while.

THE CHAIRMAN: How far is it from Edmonton to Yellowknife -- about 700 miles?

MR. PORRITT: Yes.

THE CHAIRMAN: Only 200 more miles from Edmonton to Bathurst Inlet?

MR. PORRITT: Yes; that is direct -- air miles.

I have some extra maps. I will leave this one with you. If we are going here (indicating) it is 950 miles.

THE CHAIRMAN: Nine hundred and fifty miles going from Edmonton to Uranium City?

MR. PORRITT: Yes. You can keep that copy of the map if you wish.

THE CHAIRMAN: Prince Albert doesn't appear on this map, does it?

MR. PORRITT: No, unfortunately not.

THE CHAIRMAN: You have just drawn a



line straight south from Bathurst Inlet?

MR. PORRITT: It is just an interesting note. If we are finding short routes to the Arctic we have some shorter routes than we thought we had.

THE CHAIRMAN: It would be much shorter, if you wanted to build this line you are speaking of, up towards Bathurst Inlet, starting from Waterways and going over to the east line of Lake Athabasca.

MR. PORRITT: If they wanted to develop that area -- the east end of Lake Athabasca and the Precambrian Shield -- they have got to enter it. If they wanted to get into that part of the Precambrian Shield they have got to get into it; there is no use saying: "We will go along the eastern side of it." You have still got to get into it, and there is no outside access by road. The terrain isn't suitable for building roads. The railway wouldn't have anything in this area. You have still got twenty or thirty miles from its closest point into the Precambrian Shield, and if the Precambrian Shield does hold any minerals it is unlikely that they would be on the edge of it; it is more likely they would be somewhere in the middle of it -- not right on one edge.

So that if they do want to survey that area of Canada I feel that the time has come -- the ideal solution would be a railway from Northern Saskatchewan or somewhere to tap this



country.

THE CHAIRMAN: What is wrong with a railway line from Waterways to the east end of Lake Athabasca?

MR. PORRITT: You would save many river crossings if you try to develop this particular area.

COMMISSIONER THOMPSON: You have already got access to Bathurst Inlet now?

MR. PORRITT: Yes.

COMMISSIONER THOMPSON: You have got means of access from Churchill. There are several points of access to Bathurst Inlet. I think it is a little beyond our Terms of Reference.

MR. PORRITT: I would suggest that if it is going to be serviced here it should be . . .

MR. BALDWIN: He has been in Edmonton for a few days! His remarks are based on the start from Edmonton. He has been indoctrinated!

MR. PORRITT: Then, another point I would like to bring out is that freight is not a cost factor in uranium production.

We have heard quite a little in the past few years so far as uranium is concerned on getting it cheaper. Freight cost is not a factor in uranium production at all.

We all know uranium and its allied products are not cost factor products -- that is, the



cost of transportation is not a controlling factor -- not by any means; it is merely a drop in the bucket of an industry so highly specialized and priced. Any savings in transport at the moment as far as Uranium City is concerned would only lead to a reduction in wage employment in the area.

If you reduced the freight costs you would just cut out some of the labour; you would only be taking some jobs away. It wouldn't be helping the industry.

The industry is a highly profitable industry. I have here some clippings out of the last Northern Miner. I have one here: "Gunnar well prepared to meet competitor." Another one here: "Candos one million dollars cash in uranium company. Will still have a hundred million dollars in cash if the thing was cut off almost any time." I have got a lot of these clippings. I can leave them here if anybody wants to look at them.

THE CHAIRMAN: If you would file them we would appreciate it.

MR. PORRITT: They are all out of the Northern Miner today. I will leave them with you. They are quite interesting.

For example, the Great Bear Lake properties would not have been able to carry on through the many years if transport costs were the controlling



factor.

If we look at world market trends and capacity to use this specialized product the reports all indicate a serious cutback in production is in the offing, as over-supply seems to be the factor; so to develop a freight potentiality we would have to get back to our base metal and minerals that are in demand on world markets.

The Great Slave Lake, with its approximately 1,000 miles of shoreline, gives easy access to much of the potential mining areas -- gas, oil, limestone, iron, sulphur, base and precious minerals -- a list too long to print with various names -- which have been located. But it is cheaper transport, by direct handling through the use of ore cars on lake barges, connecting in a harbour with a rail link to the industrial areas of Canada where the supplies of concentrates can be refined or shipped to world markets without loading and unloading as other means of transport make necessary -- that will be the turning point in our North's development.

I have a paragraph here on the Great Slave Lake, 260 miles closer to the Arctic. That is in the case that if a railway link was put to the Great Slave Lake we would be 260 miles closer to the Arctic than we are at present; and also double the transport season. . .



THE CHAIRMAN: Would you mind pausing there? You say it would be "almost double the transport season of the Waterways-Fort Smith route..." Why is that?

MR. PORRITT: Taking the Northern Transportation Company's cut-off date -- all the reasons why they cut off at the 10th of August in Waterways.

THE CHAIRMAN: Why do you think Northern Transportation would change its policy if there were to be a railroad built up there?

MR. PORRITT: Well, you have double the equipment. It would cut off a lot of river hauling. With the number of tugs they have they would have that many more tugs; and they would have that many more barges. It would be cutting that 260 miles off the water route, and with shorter delays on the lake it would be giving them more equipment and shorter hauls.

THE CHAIRMAN: That is assuming that they stopped hauling from Waterways and hauled only from, say, a port on Great Slave Lake?

MR. PORRITT: Well, that is assuming that; but it is a pretty good assumption on the one basis of the rate structure; that is the zoning rate, again. It would hardly be any more expensive than it would be at Edmonton. Maybe it is costing 3 cents a pound now; maybe



it would it would only cost one cent a pound.

THE CHAIRMAN: You are assuming in your statement, are you not, that Northern Transportation would take its equipment off the river and just operate on the lake?

MR. PORRITT: I am not permitted to say, but in talking with Northern Transportation officials -- with their general manager -- one of his statements to me was: "If and when there is a railway goes to Great Slave we will be at the end of it." He said: "Don't worry; we will be there."

THE CHAIRMAN: So that they will no longer be operating down the river?

MR. PORRITT: No longer all the way down the river.

THE CHAIRMAN: I see.

MR. PORRITT: At Uranium City everybody acknowledges, who has been in the business, that Uranium City wouldn't be served as well as it is now if they served it from the railway centre at Peace Point; therefore, Northern Transportation would always maintain their base at Waterways for Uranium City.

THE CHAIRMAN: Well, as I understand it, about 80 or 90 per cent of Northern Transportation's business is business that is taking place between Waterways and Uranium City.



MR. PORRITT: Acknowledged.

THE CHAIRMAN: Is that right?

MR. PORRITT: That is right; but they would probably have more equipment -- if you are going to start a business you would have to start it at the point most economic, and the end of the railway line is going to be the most economic place.

THE CHAIRMAN: Suppose the railway were to come along the route which you advocate, you are suggesting, are you not, that Northern Transportation will be operating from Hay River?

MR. PORRITT: Well, I expect they would be.

THE CHAIRMAN: And that would cut off Uranium City from service?

MR. PORRITT: No.

THE CHAIRMAN: If they took their equipment, now serving 80 per cent Uranium City, and took it up and operated it on Great Slave Lake...

MR. PORRITT: I think there is a little bit of a misunderstanding there. There is a big difference there between serving Uranium City and -- the route that is served by Northern Transportation is from Fort Smith. For instance, by taking facilities from Fort Smith it is only...

THE CHAIRMAN: It is only those facilities that they have now in Bell Rock that they would move to the lake?



MR. PORRITT: I don't suppose they would move all of them.

THE CHAIRMAN: And the services to Lake Athabasca -- everything that is south of portage...

MR. PORRITT: Yes.

THE CHAIRMAN: ...would stay the same?

MR. PORRITT: Yes. It is a distinct two routes. I imagine they would just move part of their installation. They would still work out of Port Smith.

I would like to go into the fish freight potential. The fishing industry of the Great Slave now has a potential of up to one thousand carloads per year -- and this from one lake; whereas, with utilisation of a few of our five hundred odd lakes within the Northwest Territory capable of commercial fishing the development of storage facilities and the use of many bi-products, it could exceed three thousand carloads per year.

We must not lose sight of the fact that fish is a crop to be harvested, and with our modern research and study can be a continuing resource.

THE CHAIRMAN: Mr. Porritt, isn't the limitation on the fishing industry now imposed by conservation measures rather than by market rationing?



MR. PORRITT: Yes. The Fisheries Department has two departments. They have the Department of Fishery Research which is very well established on the Great Slave Lake. They are now extending their operations and they have survey crews working right across the northern part of the territories -- the central part of the territories. They are starting one crew of 12 men around the Yellowknife area to Martin Lake north of Fort Rae and Lac La Martre, and they are gradually working east on some of the other lakes; and in the centre there is a party working in the barren lands, and another party working on the Hudson Bay, coming west; and taking all of these lakes it might take a three years' survey. But the results so far have been very encouraging.

On Lac La Martre where they considered it was only fisheries the Indians were reluctant to do any fishing. It was advocated that the fishing there would be done by Indians, as an Indian fishery; but they screamed and thought it was no good at all; they said they weren't able to catch fish. This research study indicates that it is a good lake and it indicates that the native people of the area could be self-sustaining by using their own initiative to fish there as long as there is a commercial outlet.

I believe there is a plan to go ahead with



Lac La Martre; and we have about 500 lakes in the Northwest Territory that could be fished commercially. At present we have one operating with aircraft into Hay River and he is just breaking even. He is not too sure whether it is a profitable industry, because at present our fishing industry is subject to having to ship them as we get them. We have no storage facilities. With storage facilities and industry developing there to handle the fish bi-products it would be easy to double the fish coming out of the area.



THE CHAIRMAN: Who are the big fish operators?

MR. PORRITT: There is McGinnis Products Corporation, there is Menzie, W. R. Menzie Fisheries, there is the Alaska Fisheries, there is K. & T. Fisheries, Carter Fisheries -- I believe they are about our most progressive fisheries at the moment. There are several other fisheries shipping, individual small groups, but those are the main ones.

THE CHAIRMAN: Which ones of those have offices in Edmonton?

MR. PORRITT: Alaska Fisheries, Menzie Fisheries and -- not Carter; Carter is the only one who hasn't an office in Edmonton.

THE CHAIRMAN: Has McGinnis?

MR. PORRITT: Yes, McGinnis has an office. There is so much handling of our fish products at the moment. It is safe to say that about two-thirds of the fish is waste, because you have to bring fish out and everything has to be No. 1. They don't advertise the fact, but if the boat is coming in and it happens to get storm-bound for a day he just dumps it out. It is cheaper to dump it out than get nothing for hauling it in. If there were plants it would always be worth something. You are hauling almost fifty per cent ice, every box has fifty



per cent ice, and every time you handle it from truck to train and boat to truck it has to be re-iced and checked. If a truck leaves with a load of fish and there is fifty per cent, they have lost half of the ice when it arrives; but on a train the ice lasts much longer in a refrigerated car, the temperature is regulated.

The continuing resource of fish is quite an interesting thing. They studied it carefully, and if we don't use it it eats itself up. Some of the big predatory fish will eat twice its weight in a day.

There are the oil shipments coming to the north of over 4 million gallons a year, that is this year's, according to Imperial Oil and other companies who stated that to me.

I think that is about it -- unless there are some more questions.

COMMISSIONER GAINER: Just on that question, Mr. Porritt, what is your version of the way northern oil products mix with the products coming from the south north? What exactly can the wells provide, for what products and what times of the year?

MR. PORRITT: Well, it is seasonal, but with storage facilities that wouldn't be a serious problem. The equipment today -- I don't know whether their wells are developed to the stage



where they are getting full utilization or need more wells. They don't supply enough even for the Arctic shipments.

COMMISSIONER GAINER: I am told that is the case in the summer.

MR. PORRITT: Yes.

COMMISSIONER GAINER: But they have tremendous potential in the wells?

MR. PORRITT: I think there is some limiting factor. They either haven't got sufficient wells or the capacity isn't enough, and I know their refinery isn't big enough; it isn't established, they haven't got the equipment there. I don't know which it is. I know that at present their production is all taken for DEW line purposes and they can't supply any of the requirements.

There was one paper I would like to file to also back up a little bit on the question of development. It is a press release from Ottawa -- Major Road Programme for the North -- and gives a little information on road construction work and the plans and the bridges to be built. One of the things I wanted to say in connection with this here -- lumber industry wants roads. I would like to read this and I will file the whole thing. It says here:

"Other development road expenditures in the

"Northwest Territories will provide \$1,500,000



"for the hard surfacing of the Fitzgerald-
"Bell Rock Portage Road on the Slave River
"transportation route where waterborne freight,
"transported in and out of the Northwest Terri-
"tories along the Mackenzie River system,
"must be trucked over a 24-mile portage due
"to rapids on the Slave River at the Alberta
"boundary. The sum of two and a half million
"dollars will be provided for a new 78-mile
"road from Peace Point to the west boundary of
"Wood Buffalo National Park. This will assist
"in developing the timber resources of the area,
"and when the Province of Alberta constructs a
"road from North Vermilion, will provide the
"first year-round overland communication be-
"tween Fort Smith and outside points, and
"greatly facilitate the economic development
"of northeastern Alberta."

I would like to file that, Mr. Secretary.
There may be some information in it which may be
useful.

COMMISSIONER GAINER: I am just interested
in the very last statement of your brief, which says:
"It is expected loadings at Hay River Harbour termi-
nal will exceed 40,000 tons this year." Would you
tell us if you have any information that that is
the case?

MR. PORRITT: Last year Yellowknife



Transportation Company gave me their figure of 41,800 tons. I went to see them shortly before I came down here, and then I phoned their office about two weeks ago, and while I didn't copy the figures down, they said they were exceeding last year's figures as they went along. They added equipment, they spent over a million dollars in new equipment this year, which was built at the drydocks at Hay River.

COMMISSIONER GAINER: You feel that this 40,000 tons can be justified on the basis of what has been running this year and the year before?

MR. PORRITT: Yes, and they have had to handle other freight to Northern Transport to help them out; they can't handle all the equipment that is coming in there.

THE CHAIRMAN: Mr. Feehan, have you any questions that you would like to ask?

MR. FEEHAN: I have no questions, but I have some communications here, sir.

Mr. Baldwin has asked me to ask Mr. Porritt whether or not he has actually travelled the area between Pine Point and Fort Smith himself overland?

MR. PORRITT: Yes, I have travelled much of the area -- not this year, but I have travelled much of the area. I have staked claims in the area south and both east and west of Pine Point, and I have been in the area, passed through most of the



area. In 1929 and 1930 we landed in many of the slough holes in there. We were eaten alive with mosquitoes, and we could find nothing but bog wherever we went.

THE CHAIRMAN: Are there many outcroppings?

MR. PORRITT: No, not much. There is just the odd ridge; if you follow a ridge you will get an odd outcropping. There are always possibilities, but it isn't considered a mineral area, except the areas running east and west parallel to the lakeshore. I have heard people saying -- if I refer to the McGregor Report -- in some of his maps he shows lead zinc south of the border, but whether it is sort of wishful thinking to get the lead zinc down there, I don't know, but it is pretty hard to tell, and if there is any knowledge of it, somebody has had a sneak preview that none of the rest of us have had the privilege to have. I don't know of any in the park itself. There is not supposed to be prospecting, and if there is it is a sneak preview that somebody has had. I wouldn't want to say whether there is mineral in the park or not.

I would like to leave these other maps.

THE CHAIRMAN: Are these different maps?

MR. PORRITT: Yes; there are three different maps -- Lake Athabasca and Fort Smith, the route between there and Hay River.

If at any time anybody wants to bring me



back to question me, I would be available, as long as I am in the city.

THE CHAIRMAN: Thank you very much.

Now, you have two other communications, Mr. Feehan. Perhaps we can deal with them.

MR. FEEHAN: The first is a communication by way of a letter from the Alberta Chamber of Commerce under date August 14th, 1959, and signed by D. S. Griffin. Shall I file that or do you wish me to read it?

THE CHAIRMAN: Would anyone like to read it?

MR. BALDWIN: I can read it at lunch, sir.

THE CHAIRMAN: They are explaining that they can't take sides.

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SUBMISSION OF
ALBERTA CHAMBER OF COMMERCE

August 14, 1959

Mr. A. Paterson, Secretary,
Royal Commission on the Great Slave Lake Railway,
354 Federal Building,
Edmonton, Alberta.

Dear Mr. Paterson:

The Alberta Chamber of Commerce is a federation of some 130 community boards of trade and chambers of commerce in all corners of this province. The Chamber is keenly interested in the question of the Northern Railway from the viewpoint of the welfare and future development of the whole Province of Alberta. The Chamber recognizes that the proposed railway, while directly affecting only a portion of the province, may well have a very pronounced impact on other areas of the province, and that the nature of this impact may vary substantially depending upon the route selected for the railroad.

The Alberta Chamber is, however, constitutionally committed to working for the benefit of the entire province, and avoids becoming involved in questions of local or regional scope within the province, particularly when members of the Chamber are involved on various sides to a dispute. In the years when only one route was being proposed, or even considered, for a railway to Great Slave Lake,



the Alberta Chamber naturally endorsed the construction of that railway. The support given another route by the Alberta Royal Commission on Northern Development necessarily altered the Chamber's position, and at its last annual meeting the delegates adopted, with only one dissenting vote in well over one hundred, the following resolution:

"Whereas the construction of a railway
"line from Alberta to the south shore of Great
"Slave Lake is now essential to the develop-
"ment of Northern Alberta and the Northwest
"Territories and the exploration of natural
"resources for the general benefit of the
"economy of Canada;

"Therefore be it resolved that the
"Federal Government be urged to start im-
"mediately on the construction of a railroad
"connecting the south shore of Great Slave
"lake with existing facilities on a route
"which will contribute the most to the economy
"of Alberta and Canada."

In addition, the Alberta Chamber has for years advocated the provision by the Alberta Government of crown land for the right-of-way for the railway north, with no reference to a route.

The Alberta Chamber does not represent itself as competent in technical fields, and



consequently seeks to confine its recommendations to broad areas of policy within which the engineers, economists and others technically qualified may decide on detail. The Chamber and its Northern Development Committee would value an opportunity to study the submissions of the railway companies to the Government of Canada in this connection, should it be possible to have these made available. It is felt that the recommendations of qualified technical experts, that must be the basis of those submissions, might well throw a new light on at least some aspects of the whole problem. In this event, the Chamber might find it desirable to supplement the foregoing with a further submission.

In any event, the Chamber will appreciate the opportunity to attend public hearings held by the Commission, and would welcome the opportunity to assist the Commission, should the members feel that there is any way we might do so.

We would appreciate word, at the earliest possible date convenient to you, of the centres at which the Commission will hold hearings. As you can imagine, it often takes some time to make arrangements within an organization such as this, with officers and directors scattered all over the province, and we would want to ensure



that representatives of the Chamber are present whenever your hearings are held -- at least within the province.

Sincerely,

"D. S. Griffin"

MR. FEEHAN: The second is a communication from Sherritt Gordon Mines Limited, 25 King Street West, Toronto, Canada, under date August 13th, 1959, and signed by E. L. Brown, President and Managing Director of the company.

THE CHAIRMAN: I think we will have that read.

MR. FEEHAN: (reads)

Mr. A. Paterson, Secretary,
Royal Commission on the Great Slave Lake Railway,
354 Federal Public Building,
Toronto, Alberta.

Dear Sir:

We wish to submit the following information for the consideration of the Commission.

Sherritt Gordon Mines Limited owns and operates a nickel-cobalt refinery at Fort Saskatchewan, in the Edmonton area. This refinery was built at a cost of over \$32,000,000 and has capacity to treat a substantial tonnage of custom concentrate in addition to the tonnage of concentrate produced by our own mines at Lynn Lake,



Manitoba. It is the only nickel refinery on this continent available for the treatment of custom concentrate. At the present time we are receiving nickel concentrate shipments from the North Rankin mine on Hudson Bay and from the Giant Nickel mine at Hope, B. C. If sufficient copper concentrate was available for treatment, additional facilities could be provided for the production of refined copper.

One of the reasons for locating our refinery at Fort Saskatchewan was the expectation that base metal deposits would be discovered in the Precambrian area north of Waterways and east of the Mackenzie River system. Concentrates produced from deposits in this area would logically move south to Edmonton, and our refinery. Regardless of which location is finally selected for the Great Slave Lake railroad, concentrates from the area tributary to Great Slave Lake could still move over the railroad to our refinery, although the mileage via Grimshaw would be somewhat greater. However, if the Grimshaw route was selected, the area tributary to Lake Athabasca would remain cut off from railroad transportation.

From the standpoint of the mining industry this is an important area. Two of Canada's best uranium mines are located here and the occurrence of nickel, cobalt and copper showings at the



east end of Lake Athabasca has been known for many years. The remote location has discouraged exploration for base metals so that the full potentialities of the area are unknown. It is quite possible that base metal deposits of sufficient size to warrant facilities to produce concentrates could be developed by further exploration. Our refinery at Fort Saskatchewan would provide an outlet for such base metal concentrates.

It is our opinion that a railroad to Great Slave Lake via Waterways would be of greater benefit to the mining industry than a railroad via Grimshaw. We believe that the mining industry is one of the best sources of profitable freight traffic for the Canadian railways. Consequently a railroad from Waterways would have a better chance of developing profitable freight traffic than a railroad from Grimshaw.

Yours very truly,

SHERRITT GORDON MINES LIMITED

"Eldon L. Brown"

President & Managing Director.

THE CHAIRMAN: I have a letter from Pielsticker Limited addressed to me. I can read this:



Mr. M. E. Manning,
Chairman of Commission,
11756 University Avenue,
Edmonton, Alberta.

Dear Mr. Manning:

In a brief which Mr. R. G. Robertson,
Commissioner of the Northwest Territories present-
ed to the Royal Commission on Canada's Economic
Prospects in 1955 he said, in part:

"A railhead on Great Slave Lake, some 400
"miles further north than the present rail-
"heads, would have a profound effect on the
"economic development of the whole Mackenzie
"District."

Later, the Government announced its \$200 million
development programme for the Northwest Terri-
tories, including the construction of a railway.

Then, on November 21st last, the Honour-
able Alvin Hamilton, M. P., Minister of Northern
Affairs and Natural Resources, in a speech at the
University of Montreal, further confirmed the plans
to build a railway saying "the decision of the
Federal Government that railway connections are to be
extended to the south shore of Great Slave Lake
means the writing of a new and exciting chapter
in the economic history of the Mackenzie District."
But, up to the present time there has been no state-
ment as to when this project will actually get under-
way.



I submit it is of major importance that the Government make a definite announcement concerning this without further delay.

Among the reasons for urging this are -

- (1) The North has a huge mineral potential.
This opinion is supported by government, mining industry and financial interests. Good authorities believe an annual mineral output of one billion dollars to be a reasonable estimate of productive capacity by that date provided adequate transportation facilities are made available without delay.
- (2) No other means of transportation can encourage a development of this size as quickly, and surely, as a railway to the area.
- (3) Russia's far northern transportation facilities are far ahead of ours and are capable of supplying the military bases required in the event of an attack on us, or the acquisition of the vast mass of Arctic islands now assumed to belong to Canada. Our defence needs make it essential that we have, at the earliest possible moment, a much more developed network of transportation than now exists.

I trust you will use your best efforts to



see the most vital portion of the Government's programme for the Northwest Territories; namely, the construction of a railway to Great Slave Lake, is implemented in the immediate future.

Very truly yours,

"Carl Pielsticker,

President.

Is there anything else?

We will adjourn till ten o'clock tomorrow morning.

---Adjournment.
